MasterFormat® Numbers & Titles
March 29, 2011

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    05 12 23  Structural Steel for Buildings
    05 12 33  Structural Steel for Bridges
  05 13 00  Structural Stainless-Steel Framing
  05 14 00  Structural Aluminum Framing
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    05 19 13  Façade Support Truss Assemblies
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05 21 00 Steel Joist Framing
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   05 21 19 Open Web Steel Joist Framing
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- 06 01 10.71 Rough Carpentry Rehabilitation
- 06 01 10.91 Rough Carpentry Restoration
- 06 01 10.92 Rough Carpentry Preservation
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- 06 01 60.91 Plastic Restoration
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- 06 01 80.51 Composite Cleaning
- 06 01 80.71 Composite Rehabilitation
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- 06 05 73.13 Fire-Retardant Wood Treatment
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- 06 06 10.16 Wood Beam Schedule
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  06 12 13  Cementitious Reinforced Panels
  06 12 16  Stressed Skin Panels
06 13 00  Heavy Timber Construction
  06 13 13  Log Construction
  06 13 13.91 Period Horizontal Log Work
  06 13 16  Pole Construction
  06 13 23  Heavy Timber Framing
  06 13 26  Heavy Timber Trusses
  06 13 33  Heavy Timber Pier Construction
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06 15 00  Wood Decking
  06 15 13  Wood Floor Decking
  06 15 13.91 Carvel Planking
  06 15 16  Wood Roof Decking
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  06 15 33  Wood Patio Decking
06 16 00  Sheathing
  06 16 13  Insulating Sheathing
  06 16 23  Subflooring
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  06 16 33  Wood Board Sheathing
  06 16 36  Wood Panel Product Sheathing
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  06 16 53  Moisture-Resistant Sheathing Board
  06 16 63  Cementitious Sheathing
06 17 00  Shop-Fabricated Structural Wood
  06 17 13  Laminated Veneer Lumber
  06 17 23  Parallel Strand Lumber
  06 17 33  Wood I-Joists
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06 18 00  Glued-Laminated Construction
  06 18 13  Glued-Laminated Beams
  06 18 16  Glued-Laminated Columns
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  06 20 13  Exterior Finish Carpentry
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06 22 13  Standard Pattern Wood Trim

06 25 00  Prefinished Paneling
  06 25 13  Prefinished Hardboard Paneling
  06 25 16  Prefinished Plywood Paneling

06 26 00  Board Paneling
  06 26 13  Profile Board Paneling

06 40 00  Architectural Woodwork
  06 40 13  Exterior Architectural Woodwork
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06 41 00  Architectural Wood Casework
  06 41 13  Wood-Veneer-Faced Architectural Cabinets
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          07 01 20  Maintenance of Thermal Protection
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07 52 16.13 Torch-Applied Styrene-Butadiene-Styrene Modified Bituminous Membrane Roofing
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07 53 16  Chlorosulfonate-Polyethylene Roofing
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07 53 29  Polyisobutylene Roofing

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    07 71 16  Manufactured Counterflashings Systems
    07 71 19  Manufactured Gravel Stops and Fascias
    07 71 23  Manufactured Gutters and Downspouts
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07 71 26  Reglets
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11 33 00 Retractable Stairs
11 34 00 Residential Ceiling Fans
11 40 00 Foodservice Equipment
11 41 00 Foodservice Storage Equipment
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   11 41 33 Foodservice Shelving
11 42 00 Food Preparation Equipment
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11 43 00 Food Delivery Carts and Conveyors
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11 44 00 Food Cooking Equipment
   11 44 13 Commercial Ranges
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11 46 00 Food Dispensing Equipment
   11 46 13 Bar Equipment
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   11 46 19 Soda Fountain Equipment
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11 48 00 Cleaning and Disposal Equipment
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11 51 00 Library Equipment
   11 51 13 Automated Book Storage and Retrieval Systems
   11 51 16 Book Depositories
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   11 51 23 Library Stack Systems
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11 53 17 Laboratory Equipment Washers
11 53 19 Laboratory Sterilizers
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11 53 26 Laboratory Freezers
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11 53 33 Emergency Safety Appliances
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11 55 13 Planetarium Projectors
11 55 16 Planetarium Pendulums

11 56 00 Observatory Equipment
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11 56 19 Telescope Drive Mechanisms
11 56 23 Telescope Domes

11 57 00 Vocational Shop Equipment
11 59 00 Exhibit Equipment

11 60 00 Entertainment Equipment
11 61 00 Theater and Stage Equipment
11 61 13 Acoustical Shells
11 61 23 Folding and Portable Stages
11 61 33 Rigging Systems and Controls
11 61 43 Stage Curtains

11 62 00 Musical Equipment
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11 62 19 Organs

11 65 00 Athletic and Recreational Equipment
11 66 00 Athletic Equipment
11 66 13 Exercise Equipment
11 66 23 Gymnasium Equipment
11 66 23.13 Basketball Equipment
11 66 23.23 Volleyball Equipment
11 66 23.33 Interior Tennis Equipment
11 66 23.43 Interior Track and Field Equipment
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11 66 53.13 Batting/Golf Cages
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   11 67 43.23  Ping-Pong Tables
   11 67 53  Game Room Equipment
   11 67 53.13  Video Games
   11 67 53.23  Pinball Machines

11 68 00  Play Field Equipment and Structures
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   11 68 16  Play Structures
   11 68 23  Exterior Court Athletic Equipment
   11 68 23.13  Exterior Basketball Equipment
   11 68 23.23  Exterior Volleyball Equipment
   11 68 23.33  Tennis Equipment
   11 68 33  Athletic Field Equipment
   11 68 33.13  Football Field Equipment
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11 70 00  Healthcare Equipment
11 71 00  Medical Sterilizing Equipment
11 72 00  Examination and Treatment Equipment
   11 72 13  Examination Equipment
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11 73 00  Patient Care Equipment
11 74 00  Dental Equipment
11 75 00  Optical Equipment
11 76 00  Operating Room Equipment
11 77 00  Radiology Equipment
11 78 00  Mortuary Equipment
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   11 78 19  Mortuary Lifts

11 79 00  Therapy Equipment
11 80 00  Collection and Disposal Equipment
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   11 82 13  Solid Waste Bins
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   11 82 23  Recycling Equipment
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   11 82 29  Composting Equipment
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11 91 00  Religious Equipment
   11 91 13  Baptisteries
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11 93 00  Horticultural Equipment
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   11 93 16  Seeders
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   11 93 26  Flat Fillers
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      12 11 16  Sculptured Brick Panels
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   12 12 00  Wall Decorations
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      12 12 16  Framed Paintings
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      12 12 26  Wall Hangings
   12 14 00  Sculptures
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      12 14 16  Cast Sculpture
      12 14 19  Constructed Sculpture
      12 14 23  Relief Art
   12 17 00  Art Glass
      12 17 13  Etched Glass
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   12 20 00  Window Treatments
12 21 00 Window Blinds
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  12 21 13.13 Metal Horizontal Louver Blinds
  12 21 13.23 Wood Horizontal Louver Blinds
  12 21 13.33 Plastic Horizontal Louver Blinds
  12 21 16 Vertical Louver Blinds
  12 21 16.13 Metal Vertical Louver Blinds
  12 21 16.23 Wood Vertical Louver Blinds
  12 21 16.33 Plastic Vertical Louver Blinds
  12 21 23 Roll-Down Blinds
  12 21 26 Black-Out Blinds

12 22 00 Curtains and Drapes
  12 22 13 Draperies
  12 22 16 Drapery Track and Accessories

12 23 00 Interior Shutters
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12 24 00 Window Shades
  12 24 13 Roller Window Shades
  12 24 16 Pleated Window Shades
  12 24 16.13 Z-Pleated Window Shades
  12 24 16.16 Cellular Shades
  12 24 16.19 Roman Shades

12 25 00 Window Treatment Operating Hardware
  12 25 09 Window Treatment Control System
  12 25 13 Motorized Drapery Rods

12 30 00 Casework

12 31 00 Manufactured Metal Casework
  12 31 16 Manufactured Metal Sandwich Panel Casework

12 32 00 Manufactured Wood Casework
  12 32 13 Manufactured Wood-Veneer-Faced Casework
  12 32 16 Manufactured Plastic-Laminate-Clad Casework

12 34 00 Manufactured Plastic Casework
  12 34 16 Manufactured Solid-Plastic Casework

12 35 00 Specialty Casework
  12 35 17 Bank Casework
  12 35 25 Hospitality Casework
  12 35 30 Residential Casework
  12 35 30.13 Kitchen Casework
  12 35 30.23 Bathroom Casework
  12 35 30.43 Dormitory Casework
  12 35 33 Utility Room Casework
  12 35 36 Mailroom Casework
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  12 35 50 Educational/Library Casework
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  12 35 50.53 Library Casework
  12 35 50.56 Built-In Study Carrels
  12 35 53 Laboratory Casework
  12 35 53.13 Metal Laboratory Casework
12 35 53.16 Plastic-Laminate-Clad Laboratory Casework
12 35 53.19 Wood Laboratory Casework
12 35 53.23 Solid-Plastic Laboratory Casework
12 35 59 Display Casework
12 35 70 Healthcare Casework
12 35 70.13 Hospital Casework
12 35 70.16 Nurse Station Casework
12 35 70.19 Exam Room Casework
12 35 70.74 Dental Casework
12 35 83 Performing Arts Casework
12 35 91 Religious Casework

12 36 00 Countertops
12 36 13 Concrete Countertops
12 36 16 Metal Countertops
12 36 19 Wood Countertops
12 36 23 Plastic Countertops
12 36 23.13 Plastic-Laminate-Clad Countertops
12 36 40 Stone Countertops
12 36 53 Laboratory Countertops
12 36 61 Simulated Stone Countertops
12 36 61.13 Cultured Marble Countertops
12 36 61.16 Solid Surfacing Countertops
12 36 61.19 Quartz Agglomerate Countertops

12 40 00 Furnishings and Accessories
12 41 00 Office Accessories
12 41 13 Desk Accessories

12 42 00 Table Accessories
12 42 13 Ceramics
12 42 16 Flatware
12 42 16.13 Silverware
12 42 19 Hollowware
12 42 23 Glassware
12 42 26 Table Linens
12 42 26.13 Napery

12 43 00 Portable Lamps
12 43 13 Lamps
12 43 13.13 Desk Lamps
12 43 13.16 Table Lamps
12 43 13.19 Floor Lamps

12 44 00 Bath Furnishings
12 44 13 Bath Linens
12 44 13.13 Bath Mats
12 44 13.16 Bath Towels
12 44 16 Shower Curtains

12 45 00 Bedroom Furnishings
12 45 13 Bed Linens
12 45 13.13 Blankets
12 45 13.16 Comforters
12 45 16 Pillows

12 46 00 Furnishing Accessories
12 46 13  Ash Receptacles
12 46 16  Bowls
12 46 19  Clocks
12 46 23  Decorative Crafts
12 46 26  Decorative Screens
12 46 29  Vases
12 46 33  Waste Receptacles

12 48 00  Rugs and Mats
12 48 13  Entrance Floor Mats and Frames
12 48 13.13  Entrance Floor Mats
12 48 13.16  Entrance Floor Mat Frames
12 48 16  Entrance Floor Grilles
12 48 19  Entrance Floor Gratings
12 48 23  Entrance Floor Grids
12 48 26  Entrance Tile
12 48 43  Floor Mats
12 48 43.13  Chair Mats
12 48 53  Rugs
12 48 53.13  Runners
12 48 53.16  Oriental Rugs

12 50 00  Furniture
12 51 00  Office Furniture
12 51 16  Case Goods
12 51 16.13  Metal Case Goods
12 51 16.16  Wood Case Goods
12 51 16.19  Plastic-Laminate-Clad Case Goods
12 51 19  Filing Cabinets
12 51 19.13  Lateral Filing Cabinets
12 51 19.16  Vertical Filing Cabinets
12 51 23  Office Tables
12 51 83  Custom Office Furniture

12 52 00  Seating
12 52 13  Chairs
12 52 19  Upholstered Seating
12 52 23  Office Seating
12 52 70  Healthcare Seating
12 52 83  Custom Seating

12 53 00  Retail Furniture
12 53 83  Custom Retail Furniture

12 54 00  Hospitality Furniture
12 54 13  Hotel and Motel Furniture
12 54 16  Restaurant Furniture
12 54 83  Custom Hospitality Furniture

12 55 00  Detention Furniture
12 55 13  Detention Bunks
12 55 16  Detention Desks
12 55 19  Detention Stools
12 55 23  Detention Tables
12 55 26  Detention Safety Clothes Hooks
| 12 55 83 | Custom Detention Furniture |
| 12 55 86 | Detention Control Room Furniture |

**12 56 00 Institutional Furniture**
- 12 56 23 Religious Furniture
- 12 56 33 Classroom Furniture
- 12 56 33.13 Fixed Classroom Tables
- 12 56 39 Lecterns
- 12 56 43 Dormitory Furniture
- 12 56 51 Library Furniture
- 12 56 51.13 Book Shelves
- 12 56 51.16 Study Carrels
- 12 56 51.19 Index Card File Cabinets
- 12 56 52 Audio-Visual Furniture
- 12 56 53 Laboratory Furniture
- 12 56 70 Healthcare Furniture
- 12 56 83 Custom Institutional Furniture
- 12 56 86 Institutional Control Room Furniture

**12 57 00 Industrial Furniture**
- 12 57 13 Welding Benches
- 12 57 16 Welding Screens
- 12 57 19 Laser Containment Screens
- 12 57 83 Custom Industrial Furniture
- 12 57 86 Industrial Control Room Furniture

**12 58 00 Residential Furniture**
- 12 58 13 Couches and Loveseats
- 12 58 13.13 Futons
- 12 58 16 Residential Chairs
- 12 58 16.13 Reclining Chairs
- 12 58 19 Dining Tables and Chairs
- 12 58 23 Coffee Tables
- 12 58 26 Entertainment Centers
- 12 58 29 Beds
- 12 58 29.13 Daybeds
- 12 58 33 Dressers
- 12 58 33.13 Armoires
- 12 58 36 Nightstands
- 12 58 83 Custom Residential Furniture

**12 59 00 Systems Furniture**
- 12 59 13 Panel-Hung Component System Furniture
- 12 59 16 Free-Standing Component System Furniture
- 12 59 19 Beam System Furniture
- 12 59 23 Desk System Furniture
- 12 59 83 Custom Systems Furniture

**12 60 00 Multiple Seating**

**12 61 00 Fixed Audience Seating**
- 12 61 13 Upholstered Audience Seating
- 12 61 16 Molded-Plastic Audience Seating

**12 62 00 Portable Audience Seating**
- 12 62 13 Folding Chairs
12 62 16 Interlocking Chairs
12 62 19 Stacking Chairs
12 63 00 Stadium and Arena Seating
  12 63 13 Stadium and Arena Bench Seating
  12 63 23 Stadium and Arena Seats
12 64 00 Booths and Tables
12 65 00 Multiple-Use Fixed Seating
12 66 00 Telescoping Stands
  12 66 13 Telescoping Bleachers
  12 66 23 Telescoping Chair Platforms
12 67 00 Pews and Benches
  12 67 13 Pews
  12 67 23 Benches
12 68 00 Seat and Table Assemblies
  12 68 13 Pedestal Tablet Arm Chairs
12 90 00 Other Furnishings
12 92 00 Interior Planters and Artificial Plants
  12 92 13 Interior Artificial Plants
  12 92 33 Interior Planters
  12 92 43 Interior Landscaping Accessories
12 93 00 Site Furnishings
  12 93 13 Bicycle Racks
  12 93 14 Bicycle Lockers
  12 93 23 Trash and Litter Receptors
  12 93 33 Manufactured Planters
  12 93 43 Site Seating and Tables
  12 93 43.13 Site Seating
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   13 01 00  Operation and Maintenance of Special Construction
      13 01 10  Operation and Maintenance of Special Facility Components
      13 01 11  Operation and Maintenance of Swimming Pools
      13 01 12  Operation and Maintenance of Fountains
      13 01 13  Operation and Maintenance of Aquariums
      13 01 14  Operation and Maintenance of Amusement Park Structures and Equipment
      13 01 18  Operation and Maintenance of Ice Rinks
      13 01 20  Operation and Maintenance of Special Purpose Rooms
      13 01 21  Operation and Maintenance of Controlled Environment Rooms
      13 01 23  Operation and Maintenance of Planetariums
      13 01 30  Operation and Maintenance of Special Structures
      13 01 40  Operation and Maintenance of Integrated Construction
      13 01 49  Operation and Maintenance of Radiation Protection
      13 01 50  Operation and Maintenance of Special Instrumentation
      13 01 51  Operation and Maintenance of Stress Instrumentation
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      13 06 50  Schedules for Special Instrumentation

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      13 08 10  Commissioning of Special Facility Components
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      13 08 12  Commissioning of Fountains
      13 08 13  Commissioning of Aquariums
      13 08 14  Commissioning of Amusement Park Structures and Equipment
      13 08 18  Commissioning of Ice Rinks
      13 08 20  Commissioning of Special Purpose Rooms
      13 08 21  Commissioning of Controlled Environment Rooms
      13 08 23  Commissioning of Planetariums
      13 08 30  Commissioning of Special Structures
      13 08 40  Commissioning of Integrated Construction
      13 08 50  Commissioning of Special Instrumentation

   13 10 00  Special Facility Components

   13 11 00  Swimming Pools
      13 11 13  Below-Grade Swimming Pools
      13 11 23  On-Grade Swimming Pools
      13 11 33  Elevated Swimming Pools
      13 11 43  Recirculating Gutter Systems
      13 11 46  Swimming Pool Accessories
      13 11 49  Swimming Pool Cleaning Equipment
      13 11 53  Movable Pool Bulkheads
13 11 56  Movable Pool Floors

13 12 00  Fountains
  13 12 13  Exterior Fountains
  13 12 23  Interior Fountains

13 13 00  Aquariums

13 14 00  Amusement Park Structures and Equipment
  13 14 13  Water Slides
  13 14 16  Wave Generating Equipment
  13 14 23  Amusement Park Rides

13 17 00  Tubs and Pools
  13 17 13  Hot Tubs
  13 17 23  Therapeutic Pools
  13 17 33  Whirlpool Tubs

13 18 00  Ice Rinks
  13 18 13  Ice Rink Floor Systems
  13 18 16  Ice Rink Dasher Boards

13 19 00  Kennels and Animal Shelters
  13 19 13  Kennel Enclosures and Gates
  13 19 16  Kennel Feeding Devices

13 20 00  Special Purpose Rooms

13 21 00  Controlled Environment Rooms
  13 21 13  Clean Rooms
  13 21 16  Hyperbaric Rooms
  13 21 23  Insulated Rooms
  13 21 26  Cold Storage Rooms
  13 21 26.13  Walk-in Coolers
  13 21 26.16  Walk-in Freezers
  13 21 29  Constant Temperature Rooms
  13 21 48  Sound-Conditioned Rooms

13 22 00  Office Shelters and Booths

13 23 00  Planetariums

13 24 00  Special Activity Rooms
  13 24 16  Saunas
  13 24 26  Steam Baths
  13 24 66  Athletic Rooms

13 26 00  Fabricated Rooms
  13 26 13  Storm Shelter Rooms

13 27 00  Vaults
  13 27 16  Modular Fire Vaults
  13 27 53  Security Vaults
  13 27 53.13  Modular Concrete Security Vaults
  13 27 53.16  Modular Metal-Clad Laminated Security Vaults

13 28 00  Athletic and Recreational Special Construction
  13 28 13  Indoor Soccer Boards
  13 28 16  Safety Netting
  13 28 19  Arena Football Boards
  13 28 26  Floor Sockets
13 28 33 Athletic and Recreational Court Walls
13 28 66 Demountable Athletic Surfaces

13 30 00 Special Structures

13 31 00 Fabric Structures
13 31 13 Air-Supported Fabric Structures
13 31 13.13 Single-Walled Air-Supported Structures
13 31 13.16 Multiple-Walled Air-Supported Structures
13 31 23 Tensioned Fabric Structures
13 31 33 Framed Fabric Structures

13 32 00 Space Frames
13 32 13 Metal Space Frames
13 32 23 Wood Space Frames

13 33 00 Geodesic Structures
13 33 13 Geodesic Domes

13 34 00 Fabricated Engineered Structures
13 34 13 Glazed Structures
13 34 13.13 Greenhouses
13 34 13.16 Solariums
13 34 13.19 Swimming Pool Enclosures
13 34 13.23 Sunrooms
13 34 13.26 Conservatories
13 34 16 Grandstands and Bleachers
13 34 16.13 Grandstands
13 34 16.53 Bleachers
13 34 18 Post Frame Building Systems
13 34 19 Metal Building Systems
13 34 23 Fabricated Structures
13 34 23.13 Portable and Mobile Buildings
13 34 23.14 Fabricated Classroom Buildings
13 34 23.16 Fabricated Control Booths
13 34 23.19 Fabricated Dome Structures
13 34 23.23 Fabricated Substation Control Rooms
13 34 56 Observatories

13 35 00 Rammed Earth Construction
13 35 13 Rammed Earth Walls
13 35 13.13 Traditional Rammed Earth Walls
13 35 13.23 Stabilized Insulated Rammed Earth Walls

13 36 00 Towers
13 36 13 Metal Towers
13 36 13.13 Steel Towers
13 36 23 Wood Towers

13 40 00 Integrated Construction

13 42 00 Building Modules
13 42 13 Bathroom Unit Modules
13 42 25 Hospitality Unit Modules
13 42 33 Apartment Unit Modules
13 42 43 Dormitory Unit Modules
13 42 63 Detention Cell Modules
13 42 63.13 Precast-Concrete Detention Cell Modules
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- 22 41 16 Residential Lavatories and Sinks
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- 22 41 16.16 Residential Sinks
- 22 41 19 Residential Bathtubs
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- 22 42 16 Commercial Lavatories and Sinks
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- 22 42 16.16 Commercial Sinks
- 22 42 19 Commercial Bathtubs
- 22 42 23 Commercial Showers
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23 64 23 Scroll Water Chillers
23 64 26 Rotary-Screw Water Chillers

23 65 00 Cooling Towers
23 65 13 Forced-Draft Cooling Towers
23 65 13.13 Open-Circuit, Forced-Draft Cooling Towers
23 65 13.16 Closed-Circuit, Forced-Draft Cooling Towers
23 65 16 Natural-Draft Cooling Towers
23 65 23 Field-Erected Cooling Towers
23 65 33 Liquid Coolers

23 70 00 Central HVAC Equipment

23 71 00 Thermal Storage
23 71 13 Thermal Heat Storage
23 71 13.13 Room Storage Heaters for Thermal Storage
23 71 13.16 Heat-Pump Boosters for Thermal Storage
23 71 13.19 Central Furnace Heat-Storage Units
23 71 13.23 Pressurized-Water Thermal Storage Tanks
23 71 16 Chilled-Water Thermal Storage
23 71 19 Ice Storage
23 71 19.13 Internal Ice-on-Coil Thermal Storage
23 71 19.16 External Ice-on-Coil Thermal Storage
23 71 19.19 Encapsulated-Ice Thermal Storage
23 71 19.23 Ice-Harvesting Thermal Storage
23 71 19.26 Ice-Slurry Thermal Storage

23 72 00 Air-to-Air Energy Recovery Equipment
23 72 13  Heat-Wheel Air-to-Air Energy-Recovery Equipment
23 72 16  Heat-Pipe Air-to-Air Energy-Recovery Equipment
23 72 19  Fixed-Plate Air-to-Air Energy-Recovery Equipment
23 72 23  Packaged Air-to-Air Energy-Recovery Units

23 73 00  Indoor Central-Station Air-Handling Units
23 73 13  Modular Indoor Central-Station Air-Handling Units
23 73 23  Custom Indoor Central-Station Air-Handling Units
23 73 33  Indoor Indirect Fuel-Fired Heating and Ventilating Units
23 73 33.13 Indoor Indirect Oil-Fired Heating and Ventilating Units
23 73 33.16 Indoor Indirect Gas-Fired Heating and Ventilating Units
23 73 39  Indoor, Direct Gas-Fired Heating and Ventilating Units

23 74 00  Packaged Outdoor HVAC Equipment
23 74 13  Packaged, Outdoor, Central-Station Air-Handling Units
23 74 23  Packaged, Outdoor, Heating-Only Makeup-Air Units
23 74 23.13 Packaged, Direct-Fired, Outdoor, Heating-Only Makeup-Air Units
23 74 23.16 Packaged, Indirect-Fired, Outdoor, Heating-Only Makeup-Air Units
23 74 33  Dedicated Outdoor-Air Units

23 75 00  Custom-Packaged Outdoor HVAC Equipment
23 75 13  Custom-Packaged, Outdoor, Central-Station Air-Handling Units
23 75 23  Custom-Packaged, Outdoor, Heating and Ventilating Makeup-Air Units
23 75 33  Custom-Packaged, Outdoor, Heating and Cooling Makeup Air-Conditioners

23 76 00  Evaporative Air-Cooling Equipment
23 76 13  Direct Evaporative Air Coolers
23 76 16  Indirect Evaporative Air Coolers
23 76 19  Combined Direct and Indirect Evaporative Air Coolers

23 80 00  Decentralized HVAC Equipment

23 81 00  Decentralized Unitary HVAC Equipment
23 81 13  Packaged Terminal Air-Conditioners
23 81 16  Room Air-Conditioners
23 81 19  Self-Contained Air-Conditioners
23 81 19.13 Small-Capacity Self-Contained Air-Conditioners
23 81 19.16 Large-Capacity Self-Contained Air-Conditioners
23 81 23  Computer-Room Air-Conditioners
23 81 26  Split-System Air-Conditioners
23 81 26.13 Small-Capacity Split-System Air-Conditioners
23 81 26.16 Large-Capacity Split-System Air-Conditioners
23 81 43  Air-Source Unitary Heat Pumps
23 81 46  Water-Source Unitary Heat Pumps

23 82 00  Convection Heating and Cooling Units
23 82 13  Valance Heating and Cooling Units
23 82 14  Chilled Beams
23 82 16  Air Coils
23 82 19  Fan Coil Units
23 82 23  Unit Ventilators
23 82 26  Induction Units
23 82 29  Radiators
23 82 33  Conectors
23 82 36  Finned-Tube Radiation Heaters
23 82 39  Unit Heaters
23 82 39.13  Cabinet Unit Heaters
23 82 39.16  Propeller Unit Heaters
23 82 39.19  Wall and Ceiling Unit Heaters
23 82 41  Water-to-Water Heat Pumps

23 83 00  Radiant Heating Units
23 83 13  Radiant-Heating Electric Cables
23 83 13.16  Radiant-Heating Electric Mats
23 83 16  Radiant-Heating Hydronic Piping
23 83 23  Radiant-Heating Electric Panels
23 83 26  Gas-Fired Radiant Heaters
23 83 33  Electric Radiant Heaters

23 84 00  Humidity Control Equipment
23 84 13  Humidifiers
23 84 13.13  Heated-Pan Humidifiers
23 84 13.16  Wetted-Element Humidifiers
23 84 13.19  Atomizing Humidifiers
23 84 13.23  Direct-Steam-Injection Humidifiers
23 84 13.26  Jacketed, Steam Humidifiers
23 84 13.29  Self-Contained Steam Humidifiers
23 84 13.33  Portable Humidifiers
23 84 16  Mechanical Dehumidification Units
23 84 16.13  Outdoor, Mechanical Dehumidification Units
23 84 16.16  Indoor, Mechanical Dehumidification Units
23 84 16.33  Portable Dehumidifiers
23 84 19  Desiccant Dehumidification Units
25 00 00 Integrated Automation
   25 01 00 Operation and Maintenance of Integrated Automation
      25 01 10 Operation and Maintenance of Integrated Automation Network Equipment
      25 01 20 Operation and Maintenance of Integrated Equipment
      25 01 30 Operation and Maintenance of Integrated Automation Instrumentation and Terminal Devices
      25 01 90 Diagnostic Systems for Integrated Automation
   25 05 00 Common Work Results for Integrated Automation
      25 05 13 Conductors and Cables for Integrated Automation
      25 05 26 Grounding and Bonding for Integrated Automation
      25 05 28 Pathways for Integrated Automation
      25 05 28.29 Hangers and Supports for Integrated Automation
      25 05 28.33 Conduits and Backboxes for Integrated Automation
      25 05 28.36 Cable Trays for Integrated Automation
      25 05 28.39 Surface Raceways for Integrated Automation
      25 05 48 Vibration and Seismic Controls for Integrated Automation
      25 05 53 Identification for Integrated Automation
   25 06 00 Schedules for Integrated Automation
      25 06 11 Schedules for Integrated Automation Network
      25 06 12 Schedules for Integrated Automation Network Gateways
      25 06 13 Schedules for Integrated Automation Control and Monitoring Network
      25 06 14 Schedules for Integrated Automation Local Control Units
      25 06 30 Schedules for Integrated Automation Instrumentation and Terminal Devices
   25 08 00 Commissioning of Integrated Automation
   25 10 00 Integrated Automation Network Equipment
      25 11 00 Integrated Automation Network Devices
         25 11 13 Integrated Automation Network Servers
         25 11 16 Integrated Automation Network Routers, Bridges, Switches, Hubs, and Modems
         25 11 19 Integrated Automation Network Operator Workstations
      25 12 00 Integrated Automation Network Gateways
         25 12 13 Hardwired Integration Network Gateways
         25 12 16 Direct-Protocol Integration Network Gateways
         25 12 19 Neutral-Protocol Integration Network Gateways
         25 12 23 Client-Server Information/Database Integration Network Gateways
      25 13 00 Integrated Automation Control and Monitoring Network
         25 13 13 Integrated Automation Control and Monitoring Network Supervisory Control
         25 13 16 Integrated Automation Control and Monitoring Network Integration Panels
         25 13 19 Integrated Automation Control and Monitoring Network Interoperability
      25 14 00 Integrated Automation Local Control Units
         25 14 13 Integrated Automation Remote Control Panels
         25 14 16 Integrated Automation Application-Specific Control Panels
         25 14 19 Integrated Automation Terminal Control Units
25 14 23 Integrated Automation Field Equipment Panels

25 15 00 Integrated Automation Software
   25 15 13 Integrated Automation Software for Network Gateways
   25 15 16 Integrated Automation Software for Control and Monitoring Networks
   25 15 19 Integrated Automation Software for Local Control Units

25 30 00 Integrated Automation Instrumentation and Terminal Devices

25 31 00 Integrated Automation Instrumentation and Terminal Devices for Facility Equipment

25 32 00 Integrated Automation Instrumentation and Terminal Devices for Conveying Equipment

25 33 00 Integrated Automation Instrumentation and Terminal Devices for Fire-Suppression Systems

25 34 00 Integrated Automation Instrumentation and Terminal Devices for Plumbing

25 35 00 Integrated Automation Instrumentation and Terminal Devices for HVAC
   25 35 13 Integrated Automation Actuators and Operators
   25 35 16 Integrated Automation Sensors and Transmitters
   25 35 19 Integrated Automation Control Valves
   25 35 23 Integrated Automation Control Dampers
   25 35 26 Integrated Automation Compressed Air Supply

25 36 00 Integrated Automation Instrumentation and Terminal Devices for Electrical Systems
   25 36 13 Integrated Automation Power Meters
   25 36 16 Integrated Automation KW Transducers
   25 36 19 Integrated Automation Current Sensors
   25 36 23 Integrated Automation Battery Monitors
   25 36 26 Integrated Automation Lighting Relays
   25 36 29 Integrated Automation UPS Monitors

25 37 00 Integrated Automation Instrumentation and Terminal Devices for Communications Systems

25 38 00 Integrated Automation Instrumentation and Terminal Devices for Electronic Safety and Security Systems

25 50 00 Integrated Automation Facility Controls

25 51 00 Integrated Automation Control of Facility Equipment

25 52 00 Integrated Automation Control of Conveying Equipment

25 53 00 Integrated Automation Control of Fire-Suppression Systems

25 54 00 Integrated Automation Control of Plumbing

25 55 00 Integrated Automation Control of HVAC
25 56 00 Integrated Automation Control of Electrical Systems
25 57 00 Integrated Automation Control of Communications Systems
25 58 00 Integrated Automation Control of Electronic Safety and Security Systems
25 90 00 Integrated Automation Control Sequences
   25 91 00 Integrated Automation Control Sequences for Facility Equipment
   25 92 00 Integrated Automation Control Sequences for Conveying Equipment
   25 93 00 Integrated Automation Control Sequences for Fire-Suppression Systems
   25 94 00 Integrated Automation Control Sequences for Plumbing
   25 95 00 Integrated Automation Control Sequences for HVAC
   25 96 00 Integrated Automation Control Sequences for Electrical Systems
   25 97 00 Integrated Automation Control Sequences for Communications Systems
   25 98 00 Integrated Automation Control Sequences for Electronic Safety and Security Systems
26 00 00  Electrical

26 01 00  Operation and Maintenance of Electrical Systems
- 26 01 10  Operation and Maintenance of Medium-Voltage Electrical Distribution
- 26 01 20  Operation and Maintenance of Low-Voltage Electrical Distribution
- 26 01 26  Maintenance Testing of Electrical Systems
- 26 01 30  Operation and Maintenance of Facility Electrical Power Generating and Storing Equipment
- 26 01 40  Operation and Maintenance of Electrical and Cathodic Protection Systems
- 26 01 50  Operation and Maintenance of Lighting
  - 26 01 50.51 Luminaire Relamping
  - 26 01 50.81 Luminaire Replacement

26 05 00  Common Work Results for Electrical
- 26 05 13  Medium-Voltage Cables
- 26 05 13.13 Medium-Voltage Open Conductors
- 26 05 13.16 Medium-Voltage, Single- and Multi-Conductor Cables
- 26 05 19  Low-Voltage Electrical Power Conductors and Cables
- 26 05 19.13 Undercarpet Electrical Power Cables
- 26 05 19.23 Manufactured Wiring Assemblies
- 26 05 23  Control-Voltage Electrical Power Cables
- 26 05 26  Grounding and Bonding for Electrical Systems
- 26 05 29  Hangers and Supports for Electrical Systems
- 26 05 33  Raceway and Boxes for Electrical Systems
- 26 05 33.13 Conduit for Electrical Systems
- 26 05 33.16 Boxes for Electrical Systems
- 26 05 33.23 Surface raceways for Electrical Systems
- 26 05 36  Cable Trays for Electrical Systems
- 26 05 39  Underfloor Raceways for Electrical Systems
- 26 05 43  Underground Ducts and Raceways for Electrical Systems
- 26 05 46  Utility Poles for Electrical Systems
- 26 05 48  Vibration and Seismic Controls for Electrical Systems
- 26 05 53  Identification for Electrical Systems
- 26 05 73  Overcurrent Protective Device Coordination Study
- 26 05 83  Wiring Connections

26 06 00  Schedules for Electrical
- 26 06 10  Schedules for Medium-Voltage Electrical Distribution
- 26 06 20  Schedules for Low-Voltage Electrical Distribution
- 26 06 20.13 Electrical Switchboard Schedule
- 26 06 20.16 Electrical Panelboard Schedule
- 26 06 20.19 Electrical Motor-Control Center Schedule
- 26 06 20.23 Electrical Circuit Schedule
- 26 06 20.26 Wiring Device Schedule
- 26 06 30  Schedules for Facility Electrical Power Generating and Storing Equipment
- 26 06 40  Schedules for Electrical and Cathodic Protection Systems
- 26 06 50  Schedules for Lighting
- 26 06 50.13 Lighting Panelboard Schedule
- 26 06 50.16 Lighting Fixture Schedule

26 08 00  Commissioning of Electrical Systems

26 09 00  Instrumentation and Control for Electrical Systems
- 26 09 13  Electrical Power Monitoring
26 09 15 Peak Load Controllers
26 09 16 Electrical Controls and Relays
26 09 17 Programmable Controllers
26 09 19 Enclosed Contactors
26 09 23 Lighting Control Devices
26 09 26 Lighting Control Panelboards
26 09 33 Central Dimming Controls
26 09 33.13 Multichannel Remote-Controlled Dimmers
26 09 33.16 Remote-Controlled Dimming Stations
26 09 36 Modular Dimming Controls
26 09 36.13 Manual Modular Dimming Controls
26 09 36.16 Integrated Multipreset Modular Dimming Controls
26 09 43 Network Lighting Controls
26 09 43.13 Digital-Network Lighting Controls
26 09 43.16 Addressable Fixture Lighting Control
26 09 61 Theatrical Lighting Controls

26 10 00 **Medium-Voltage Electrical Distribution**

26 11 00 **Substations**
26 11 13 Primary Unit Substations
26 11 16 Secondary Unit Substations

26 12 00 **Medium-Voltage Transformers**
26 12 13 Liquid-Filled, Medium-Voltage Transformers
26 12 16 Dry-Type, Medium-Voltage Transformers
26 12 19 Pad-Mounted, Liquid-Filled, Medium-Voltage Transformers

26 13 00 **Medium-Voltage Switchgear**
26 13 13 Medium-Voltage Circuit Breaker Switchgear
26 13 16 Medium-Voltage Fusible Interrupter Switchgear
26 13 19 Medium-Voltage Vacuum Interrupter Switchgear
26 13 23 Medium-Voltage Metal-Enclosed Switchgear
26 13 26 Medium-Voltage Metal-Clad Switchgear
26 13 29 Medium-Voltage Compartmentalized Switchgear

26 16 00 **Medium-Voltage Metering**

26 18 00 **Medium-Voltage Circuit Protection Devices**
26 18 13 Medium-Voltage Cutouts
26 18 16 Medium-Voltage Fuses
26 18 19 Medium-Voltage Lightning Arresters
26 18 23 Medium-Voltage Surge Arresters
26 18 26 Medium-Voltage Reclosers
26 18 29 Medium-Voltage Enclosed Bus
26 18 33 Medium-Voltage Enclosed Fuse Cutouts
26 18 36 Medium-Voltage Enclosed Fuses
26 18 39 Medium-Voltage Motor Controllers

26 20 00 **Low-Voltage Electrical Transmission**

26 21 00 **Low-Voltage Electrical Service Entrance**
26 21 13 Low-Voltage Overhead Electrical Service Entrance
26 21 16 Low-Voltage Underground Electrical Service Entrance

26 22 00 **Low-Voltage Transformers**
26 22 13 Low-Voltage Distribution Transformers
26 22 16  Low-Voltage Buck-Boost Transformers  
26 22 19  Control and Signal Transformers  

26 23 00  **Low-Voltage Switchgear**  
26 23 13  Paralleling Low-Voltage Switchgear  

26 24 00  **Switchboards and Panelboards**  
26 24 13  Switchboards  
26 24 16  Panelboards  
26 24 19  Motor-Control Centers  

26 25 00  **Enclosed Bus Assemblies**  

26 26 00  **Power Distribution Units**  

26 27 00  **Low-Voltage Distribution Equipment**  
26 27 13  Electricity Metering  
26 27 16  Electrical Cabinets and Enclosures  
26 27 19  Multi-Outlet Assemblies  
26 27 23  Indoor Service Poles  
26 27 26  Wiring Devices  
26 27 73  Door Chimes  

26 28 00  **Low-Voltage Circuit Protective Devices**  
26 28 13  Fuses  
26 28 16  Enclosed Switches and Circuit Breakers  
26 28 16.13 Enclosed Circuit Breakers  
26 28 16.16 Enclosed Switches  

26 29 00  **Low-Voltage Controllers**  
26 29 13  Enclosed Controllers  
26 29 13.13 Across-the-Line Motor Controllers  
26 29 13.16 Reduced-Voltage Motor Controllers  
26 29 23  Variable-Frequency Motor Controllers  
26 29 33  Controllers for Fire Pump Drivers  
26 29 33.13 Full-Service Controllers for Fire Pump Electric-Motor Drivers  
26 29 33.16 Limited-Service Controllers for Fire Pump Electric-Motor Drivers  
26 29 33.19 Controllers for Fire Pump Diesel Engine Drivers  

26 30 00  **Facility Electrical Power Generating and Storing Equipment**  

26 31 00  **Photovoltaic Collectors**  

26 32 00  **Packaged Generator Assemblies**  
26 32 13  Engine Generators  
26 32 13.13 Diesel-Engine-Driven Generator Sets  
26 32 13.16 Gas-Engine-Driven Generator Sets  
26 32 13.26 Gas-Turbine Engine-Driven Generators  
26 32 16  Steam-Turbine Generators  
26 32 19  Hydro-Turbine Generators  
26 32 23  Wind Energy Equipment  
26 32 26  Frequency Changers  
26 32 29  Rotary Converters  
26 32 33  Rotary Uninterruptible Power Units  

26 33 00  **Battery Equipment**  
26 33 13  Batteries  
26 33 16  Battery Racks
26 33 19  Battery Units
26 33 23  Central Battery Equipment
26 33 33  Static Power Converters
26 33 43  Battery Chargers
26 33 46  Battery Monitoring
26 33 53  Static Uninterruptible Power Supply

26 35 00  Power Filters and Conditioners
26 35 13  Capacitors
26 35 16  Chokes and Inductors
26 35 23  Electromagnetic-Interference Filters
26 35 26  Harmonic Filters
26 35 33  Power Factor Correction Equipment
26 35 36  Slip Controllers
26 35 43  Static-Frequency Converters
26 35 46  Radio-Frequency-Interference Filters
26 35 53  Voltage Regulators

26 36 00  Transfer Switches
26 36 13  Manual Transfer Switches
26 36 23  Automatic Transfer Switches

26 40 00  Electrical and Cathodic Protection
26 41 00  Facility Lightning Protection
26 41 13  Lightning Protection for Structures
26 41 13.13 Lightning Protection for Buildings
26 41 16  Lightning Prevention and Dissipation
26 41 19  Early Streamer Emission Lightning Protection
26 41 23  Lightning Protection Surge Arresters and Suppressors

26 42 00  Cathodic Protection
26 42 13  Passive Cathodic Protection for Underground and Submerged Piping
26 42 16  Passive Cathodic Protection for Underground Storage Tank

26 43 00  Surge Protective Devices
26 43 13  Transient-Voltage Suppression for Low-Voltage Electrical Power Circuits

26 50 00  Lighting
26 51 00  Interior Lighting
26 51 13  Interior Lighting Fixtures, Lamps, And Ballasts

26 52 00  Emergency Lighting

26 53 00  Exit Signs

26 54 00  Classified Location Lighting

26 55 00  Special Purpose Lighting
26 55 23  Outline Lighting
26 55 29  Underwater Lighting
26 55 33  Hazard Warning Lighting
26 55 36  Obstruction Lighting
26 55 39  Helipad Lighting
26 55 53  Security Lighting
26 55 59  Display Lighting
26 55 61  Theatrical Lighting
26 55 63  Detention Lighting
26 55 70 Healthcare Lighting
26 55 83 Broadcast Lighting

**26 56 00 Exterior Lighting**
26 56 13 Lighting Poles and Standards
26 56 16 Parking Lighting
26 56 19 Roadway Lighting
26 56 23 Area Lighting
26 56 26 Landscape Lighting
26 56 29 Site Lighting
26 56 33 Walkway Lighting
26 56 36 Flood Lighting
26 56 68 Exterior Athletic Lighting
27 00 00 Communications
   27 01 00 Operation and Maintenance of Communications Systems
      27 01 10 Operation and Maintenance of Structured Cabling and Enclosures
      27 01 20 Operation and Maintenance of Data Communications
      27 01 30 Operation and Maintenance of Voice Communications
      27 01 40 Operation and Maintenance of Audio-Video Communications
      27 01 50 Operation and Maintenance of Distributed Communications and Monitoring
   27 05 00 Common Work Results for Communications
      27 05 13 Communications Services
         27 05 13.13 Dialtone Services
         27 05 13.23 T1 Services
         27 05 13.33 DSL Services
         27 05 13.43 Cable Services
         27 05 13.53 Satellite Services
      27 05 26 Grounding and Bonding for Communications Systems
      27 05 28 Pathways for Communications Systems
      27 05 29 Hangers and Supports for Communications Systems
      27 05 33 Conduits and Backboxes for Communications Systems
      27 05 36 Cable Trays for Communications Systems
      27 05 39 Surface Raceways for Communications Systems
      27 05 43 Underground Ducts and Raceways for Communications Systems
      27 05 46 Utility Poles for Communications Systems
      27 05 48 Vibration and Seismic Controls for Communications Systems
      27 05 53 Identification for Communications Systems
   27 06 00 Schedules for Communications
      27 06 10 Schedules for Structured Cabling and Enclosures
      27 06 20 Schedules for Data Communications
      27 06 30 Schedules for Voice Communications
      27 06 40 Schedules for Audio-Video Communications
      27 06 50 Schedules for Distributed Communications and Monitoring
   27 08 00 Commissioning of Communications
   27 10 00 Structured Cabling
      27 11 00 Communications Equipment Room Fittings
         27 11 13 Communications Entrance Protection
         27 11 16 Communications Cabinets, Racks, Frames, and Enclosures
         27 11 19 Communications Termination Blocks and Patch Panels
         27 11 23 Communications Cable Management and Ladder Rack
         27 11 26 Communications Rack Mounted Power Protection and Power Strips
      27 13 00 Communications Backbone Cabling
         27 13 13 Communications Copper Backbone Cabling
         27 13 13.13 Communications Copper Cable Splicing and Terminations
         27 13 23 Communications Optical Fiber Backbone Cabling
         27 13 23.13 Communications Optical Fiber Splicing and Terminations
         27 13 33 Communications Coaxial Backbone Cabling
         27 13 33.13 Communications Coaxial Splicing and Terminations
         27 13 43 Communications Services Cabling
27 13 43.13 Dialtone Services Cabling
27 13 43.23 T1 Services Cabling
27 13 43.33 DSL Services Cabling
27 13 43.43 Cable Services Cabling
27 13 43.53 Satellite Services Cabling

27 15 00 Communications Horizontal Cabling
27 15 00.16 Voice Communications Horizontal Cabling
27 15 00.19 Data Communications Horizontal Cabling
27 15 00.23 Audio-Video Communications Horizontal Cabling
27 15 00.39 Patient Monitoring and Telemetry Communications Horizontal Cabling
27 15 00.43 Nurse Call and Intercom Communications Horizontal Cabling
27 15 00.46 Paging Communications Horizontal Cabling
27 15 00.49 Intermediate Frequency/Radio Frequency Communications Horizontal Cabling
27 15 00.53 Antennas Communications Horizontal Cabling
27 15 13 Communications Copper Horizontal Cabling
27 15 23 Communications Optical Fiber Horizontal Cabling
27 15 33 Communications Coaxial Horizontal Cabling
27 15 43 Communications Faceplates and Connectors

27 16 00 Communications Connecting Cords, Devices, and Adapters
27 16 13 Communications Custom Cable Assemblies
27 16 16 Communications Media Converters, Adapters, and Transceivers
27 16 19 Communications Patch Cords, Station Cords, and Cross Connect Wire

27 20 00 Data Communications

27 21 00 Data Communications Network Equipment
27 21 13 Data Communications Firewalls
27 21 16 Data Communications Routers, CSU/DSU, Multiplexers, Codecs, and Modems
27 21 26 Data Communications Network Management
27 21 29 Data Communications Switches and Hubs
27 21 33 Data Communications Wireless Access Points

27 22 00 Data Communications Hardware
27 22 13 Data Communications Mainframes
27 22 16 Data Communications Storage and Backup
27 22 19 Data Communications Servers
27 22 23 Data Communications Desktops
27 22 26 Data Communications Laptops
27 22 29 Data Communications Handhelds

27 24 00 Data Communications Peripheral Data Equipment
27 24 13 Printers
27 24 16 Scanners
27 24 19 External Drives
27 24 23 Audio-Video Devices
27 24 26 Virtual Reality Equipment
27 24 29 Disaster Recovery Equipment

27 25 00 Data Communications Software
27 25 13 Virus Protection Software
27 25 16 Application Suites
27 25 19 Email Software
27 25 23  Graphics/Multimedia Software
27 25 26  Customer Relationship Management Software
27 25 29  Operating System Software
27 25 33  Database Software
27 25 37  Virtual Private Network Software
27 25 39  Internet Conferencing Software

27 26 00  Data Communications Programming and Integration Services
27 26 13  Web Development
27 26 16  Database Development
27 26 19  Application Development
27 26 23  Network Integration Requirements
27 26 26  Data Communications Integration Requirements

27 30 00  Voice Communications
27 31 00  Voice Communications Switching and Routing Equipment
27 31 13  PBX/ Key Systems
27 31 23  Internet Protocol Voice Switches

27 32 00  Voice Communications Terminal Equipment
27 32 13  Telephone Sets
27 32 16  Wireless Transceivers
27 32 23  Elevator Telephones
27 32 26  Ring-Down Emergency Telephones
27 32 29  Facsimiles and Modems
27 32 36  TTY Equipment
27 32 43  Radio Communications Equipment

27 33 00  Voice Communications Messaging
27 33 16  Voice Mail and Auto Attendant
27 33 23  Interactive Voice Response
27 33 26  Facsimile Servers

27 34 00  Call Accounting
27 34 13  Toll Fraud Equipment and Software
27 34 16  Telemanagement Software

27 35 00  Call Management
27 35 13  Digital Voice Announcers
27 35 16  Automatic Call Distributors
27 35 19  Call Status and Management Displays
27 35 23  Dedicated 911 Systems

27 40 00  Audio-Video Communications
27 41 00  Audio-Video Systems
27 41 13  Architecturally Integrated Audio-Video Equipment
27 41 16  Integrated Audio-Video Systems and Equipment
27 41 16.25  Integrated Audio-Video Systems and Equipment for Restaurants and Bars
27 41 16.28  Integrated Audio-Video Systems and Equipment for Conference Rooms
27 41 16.29  Integrated Audio-Video Systems and Equipment for Board Rooms
27 41 16.51  Integrated Audio-Video Systems and Equipment for Classrooms
27 41 16.52  Integrated Audio-Video Systems and Equipment for Religious Facilities
27 41 16.61  Integrated Audio-Video Systems and Equipment for Theaters
27 41 16.62 Integrated Audio-Video Systems and Equipment for Auditoriums
27 41 16.63 Integrated Audio-Video Systems and Equipment for Stadiums and Arenas
27 41 19 Portable Audio-Video Equipment
27 41 23 Audio-Video Accessories
27 41 33 Master Antenna Television Systems
27 41 43 Audio-Video Conferencing

27 42 00 **Electronic Digital Systems**
27 42 13 Point of Sale Systems
27 42 16 Transportation Information Display Systems
27 42 19 Public Information Systems

27 50 00 **Distributed Communications and Monitoring Systems**

27 51 00 **Distributed Audio-Video Communications Systems**
27 51 13 Paging Systems
27 51 13.13 Overhead Paging Systems
27 51 16 Public Address Systems
27 51 19 Sound Masking Systems
27 51 23 Intercommunications and Program Systems
27 51 23.20 Commercial Intercommunications and Program Systems
27 51 23.30 Residential Intercommunications and Program Systems
27 51 23.50 Educational Intercommunications and Program Systems
27 51 23.63 Detention Intercommunications and Program Systems
27 51 23.70 Healthcare Intercommunications and Program Systems
27 51 26 Assistive Listening Systems

27 52 00 **Healthcare Communications and Monitoring Systems**
27 52 13 Patient Monitoring and Telemetry Systems
27 52 16 Telemedicine Systems
27 52 19 Healthcare Imaging Systems
27 52 23 Nurse Call/Code Blue Systems

27 53 00 **Distributed Systems**
27 53 13 Clock Systems
27 53 13.13 Wireless Clock Systems
27 53 16 Infrared and Radio Frequency Tracking Systems
27 53 19 Internal Cellular, Paging, and Antenna Systems

27 60 00 **Wireless Transceivers**
28 00 00  Electronic Safety and Security
28 01 00  Operation and Maintenance of Electronic Safety and Security
   28 01 10  Operation and Maintenance of Electronic Access Control and Intrusion Detection
   28 01 10.51  Maintenance and Administration of Electronic Access Control and Intrusion Detection
   28 01 10.71  Revisions and Upgrades of Electronic Access Control and Intrusion Detection
   28 01 20  Operation and Maintenance of Electronic Surveillance
   28 01 30  Operation and Maintenance of Electronic Detection and Alarm
   28 01 30.51  Maintenance and Administration of Electronic Detection and Alarm
   28 01 30.71  Revisions and Upgrades of Electronic Detection and Alarm
   28 01 40  Operation and Maintenance of Electronic Monitoring and Control
   28 01 40.51  Maintenance and Administration of Electronic Monitoring and Control
   28 01 40.71  Revisions and Upgrades of Electronic Monitoring and Control

28 05 00  Common Work Results for Electronic Safety and Security
   28 05 13  Conductors and Cables for Electronic Safety and Security
   28 05 13.13  CCTV Communications Conductors and Cables
   28 05 13.16  Access Control Communications Conductors and Cables
   28 05 13.19  Intrusion Detection Communications Conductors and Cables
   28 05 13.23  Fire Alarm Communications Conductors and Cables
   28 05 26  Grounding and Bonding for Electronic Safety and Security
   28 05 28  Pathways for Electronic Safety and Security
   28 05 28.29  Hangers and Supports for Electronic Safety and Security
   28 05 28.33  Conduits and Backboxes for Electronic Safety and Security
   28 05 28.36  Cable Trays for Electronic Safety and Security
   28 05 28.39  Surface Raceways for Electronic Safety and Security
   28 05 48  Vibration and Seismic Controls for Electronic Safety and Security
   28 05 53  Identification for Electronic Safety and Security

28 06 00  Schedules for Electronic Safety and Security
   28 06 10  Schedules for Electronic Access Control and Intrusion Detection
   28 06 20  Schedules for Electronic Surveillance
   28 06 30  Schedules for Electronic Detection and Alarm
   28 06 40  Schedules for Electronic Monitoring and Control

28 08 00  Commissioning of Electronic Safety and Security

28 10 00  Electronic Access Control and Intrusion Detection

28 13 00  Access Control
   28 13 13  Access Control Global Applications
   28 13 16  Access Control Systems and Database Management
   28 13 19  Access Control Systems Infrastructure
   28 13 26  Access Control Remote Devices
   28 13 33  Access Control Interfaces
   28 13 33.16  Access Control Interfaces to Access Control Hardware
   28 13 33.26  Access Control Interfaces to Intrusion Detection
   28 13 33.33  Access Control Interfaces to Video Surveillance
   28 13 33.36  Access Control Interfaces to Fire Alarm
28 10 43 Access Control Identification Management Systems
28 13 53 Security Access Detection
28 13 53.13 Security Access Metal Detectors
28 13 53.16 Security Access X-Ray Equipment
28 13 53.23 Security Access Explosive Detection Equipment
28 13 53.29 Security Access Sniffing Equipment
28 13 63 Access Control Vehicle Identification System

28 16 00 Intrusion Detection
28 16 13 Intrusion Detection Control, GUI, and Logic Systems
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28 16 19 Intrusion Detection Remote Devices and Sensors
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34 43 13.13  Airfield Runway Identification Lights
34 43 13.16  Airfield Runway and Taxiway Inset Lighting
34 43 16  Airfield Landing Equipment
34 43 16.13  Microwave Airfield Landing Equipment
34 43 16.16  Instrument Airfield Landing Equipment
34 43 16.19  Airfield Visual-Approach Slope Indicator Equipment
34 43 16.23  Airfield Short-Approach Lighting Equipment
34 43 16.26  Airfield Omni-Directional-Approach Lighting Equipment
34 43 16.29  Airfield Low-Intensity-Approach Lighting Equipment
34 43 16.33  Airfield High-Intensity-Approach Lighting Equipment
34 43 16.36  Airfield Precision-Approach Path Indicator Equipment
34 43 19  Airfield Traffic Control Tower Equipment
34 43 23  Weather Observation Equipment
34 43 23.13  Automatic Weather Observation Equipment
34 43 23.16  Airfield Wind Cones
34 43 26  Airfield Control Equipment
34 43 26.13  Airfield Lighting Control Equipment
34 43 26.16  Airfield Lighting PLC Control Equipment
34 43 26.19  Airfield Lighting Regulator Assembly

34 48 00  Bridge Signaling and Control Equipment
34 48 13  Operating Bridge Signals
34 48 16  Operating Bridge Control Equipment

34 50 00  Transportation Fare Collection Equipment

34 52 00  Vehicle Fare Collection
34 52 16  Vehicle Ticketing Equipment
34 52 16.13  Vehicle Ticket Vending Machines
34 52 26  Vehicle Fare Collection Equipment
34 52 26.13  Vehicle Coin Fare Collection Equipment
34 52 26.16  Vehicle Electronic Fare Collection Equipment
34 52 33  Vehicle Fare Gates

34 54 00  Passenger Fare Collection
34 54 16  Passenger Ticketing Equipment
34 54 16.13  Passenger Ticket Vending Machines
34 54 16.16  Passenger Addfare Machines
34 54 16.23  Passenger Intermodal Transfer Machines
34 54 26  Passenger Fare Collection Equipment
34 54 26.13  Passenger Coin Fare Collection Equipment
34 54 26.16  Passenger Electronic Fare Collection Equipment
34 54 33  Passenger Fare Gates

34 70 00  Transportation Construction and Equipment

34 71 00  Roadway Construction
   34 71 13  Vehicle Barriers
   34 71 13.13  Vehicle Median Barriers
   34 71 13.16  Vehicle Crash Barriers
   34 71 13.19  Vehicle Traffic Barriers
   34 71 13.26  Vehicle Guide Rails
   34 71 13.29  Vehicle Barrier Fenders
   34 71 16  Impact Attenuating Devices
   34 71 19  Vehicle Delineators
   34 71 19.13  Fixed Vehicle Delineators
   34 71 19.16  Flexible Vehicle Delineators

34 72 00  Railway Construction
   34 72 13  Railway Line
   34 72 16  Railway Siding

34 73 00  Airfield Construction
   34 73 13  Aircraft Tiedowns
   34 73 16  Airfield Grounding
   34 73 16.13  Aircraft Static Grounding
   34 73 19  Jet Blast Barriers
   34 73 23  Manufactured Airfield Control Towers
   34 73 26  Manufactured Helipads

34 75 00  Roadway Equipment
   34 75 13  Operable Roadway Equipment
   34 75 13.13  Active Vehicle Barriers

34 76 00  Railway Equipment
   34 76 13  Roadway Crossing Control Equipment

34 77 00  Transportation Equipment
   34 77 13  Passenger Loading Bridges
   34 77 13.13  Fixed Aircraft Passenger Loading Bridges
   34 77 13.16  Movable Aircraft Passenger Loading Bridges
   34 77 13.23  Ship Passenger Loading Bridges
   34 77 16  Baggage Handling Equipment
   34 77 16.13  Baggage Scanning Equipment
   34 77 16.16  Baggage Scales
   34 77 16.19  Baggage Conveying Equipment

34 80 00  Bridges

34 81 00  Bridge Machinery
   34 81 13  Single-Swing Bridge Machinery
   34 81 16  Double-Swing Bridge Machinery
   34 81 19  Cantilever Bridge Machinery
   34 81 23  Lift Bridge Machinery
   34 81 26  Sliding Bridge Machinery
   34 81 29  Pontoon Bridge Machinery
   34 81 32  Bascule Bridge Machinery

34 82 00  Bridge Specialties
34 82 13 Bridge Vibration Dampers
34 82 13.13 Visco Elastic Bridge Vibration Dampers
34 82 13.16 Tuned-Mass Bridge Vibration Dampers
34 82 19 Bridge Pier Protection
34 82 19.13 Bridge Pier Ice Shields
35 00 00  Waterway and Marine Construction
   35 01 00  Operation and Maintenance of Waterway and Marine Construction
       35 01 30  Operation and Maintenance of Coastal Construction
       35 01 40  Operation and Maintenance of Waterway Construction
       35 01 40.51  Waterway Dredging
       35 01 40.92  Preservation of Water Courses
       35 01 50  Operation and Maintenance of Marine Construction
       35 01 50.51  Marine Dredging
       35 01 50.71  Channel Excavation, Cleaning and Deepening
       35 01 70  Operation and Maintenance of Dams

35 05 00  Common Work Results for Waterway and Marine Construction
       35 05 30  Common Work Results for Coastal Construction
       35 05 40  Common Work Results for Waterway Construction
       35 05 50  Common Work Results for Marine Construction
       35 05 70  Common Work Results for Dams

35 06 00  Schedules for Waterway and Marine Construction
       35 06 30  Schedules for Coastal Construction
       35 06 40  Schedules for Waterway Construction
       35 06 50  Schedules for Marine Construction
       35 06 70  Schedules for Dams

35 08 00  Commissioning of Waterway and Marine Construction
       35 08 30  Commissioning of Coastal Construction
       35 08 40  Commissioning of Waterway Construction
       35 08 50  Commissioning of Marine Construction
       35 08 70  Commissioning of Dams

35 10 00  Waterway and Marine Signaling and Control Equipment

35 11 00  Signaling and Control Equipment for Waterways
       35 11 13  Signaling Equipment for Waterways
       35 11 53  Control Equipment for Waterways

35 12 00  Marine Signaling and Control Equipment
       35 12 13  Marine Signaling Equipment
       35 12 13.13  Lighthouse Equipment
       35 12 33  Marine Navigation Equipment
       35 12 53  Marine Control Equipment

35 13 00  Signaling and Control Equipment for Dams
       35 13 13  Signaling Equipment for Dams
       35 13 53  Control Equipment for Dams

35 20 00  Waterway and Marine Construction and Equipment
       35 20 13  Hydraulic Fabrications
       35 20 13.13  Hydraulic Bifurcation Panels
35 20 13.16 Hydraulic Bulkheads
35 20 13.19 Hydraulic Manifolds
35 20 13.23 Hydraulic Penstocks
35 20 13.26 Hydraulic Trashracks
35 20 16 Hydraulic Gates
35 20 16.13 Hydraulic Spillway Crest Gates
35 20 16.19 Hydraulic Head Gates
35 20 16.26 Hydraulic Sluice Gates
35 20 16.33 Hydraulic Miter Gates
35 20 16.39 Hydraulic Sector Gates
35 20 16.46 Hydraulic Tainter Gates and Anchorages
35 20 16.53 Hydraulic Vertical Lift Gates
35 20 16.59 Hydraulic Closure Gates
35 20 19 Hydraulic Valves
35 20 19.13 Hydraulic Butterfly Valves
35 20 19.23 Hydraulic Regulating Valves
35 20 23 Dredging
35 20 23.13 Mechanical Dredging
35 20 23.23 Hydraulic Dredging
35 20 23.33 Integrated Dredging and Dewatering

35 30 00 Coastal Construction

35 31 00 Shoreline Protection
35 31 16 Seawalls
35 31 16.13 Concrete Seawalls
35 31 16.16 Segmental Seawalls
35 31 16.19 Steel Sheet Piling Seawalls
35 31 16.23 Timber Seawalls
35 31 16.40 Stone Seawalls
35 31 19 Revetments
35 31 19.13 Sacked Cement-Sand Revetments
35 31 19.16 Concrete Unit Masonry Revetments
35 31 19.36 Gabion Revetments
35 31 19.40 Stone Revetments
35 31 23 Breakwaters
35 31 23.13 Rubble Mound Breakwaters
35 31 23.16 Precast Breakwater Modules
35 31 26 Jetties
35 31 26.13 Concrete Jetties
35 31 26.16 Concrete Unit Masonry Jetties
35 31 26.36 Gabion Jetties
35 31 26.40 Stone Jetties
35 31 29 Groins
35 31 29.13 Concrete Groins
35 31 29.16 Concrete Unit Masonry Groins
35 31 29.26 Steel Groins
35 31 29.36 Gabion Groins
35 31 29.40 Stone Groins

35 32 00 Artificial Reefs
35 32 13 Scrap Material Artificial Reefs
35 32 13.13 Scrap Concrete Artificial Reefs
35 32 13.19 Scrap Steel Artificial Reefs
35 32 13.33 Sunken Ship Artificial Reefs
35 32 16 Constructed Artificial Reefs
35 32 16.13 Constructed Concrete Artificial Reefs
35 32 16.19 Constructed Steel Artificial Reefs

35 40 00 Waterway Construction and Equipment

35 41 00 Levees
35 41 13 Landside Levee Berms
35 41 13.13 Stability Landside Levee Berms
35 41 13.16 Seepage Landside Levee Berms
35 41 16 Levee Cutoff Trenches
35 41 19 Levee Relief Wells

35 42 00 Waterway Bank Protection
35 42 13 Piling Bank Protection
35 42 13.19 Steel Sheet Piling Bank Protection
35 42 13.23 Timber Piling Bank Protection
35 42 13.26 Plastic Piling Bank Protection
35 42 29 Grout-Bag Bank Protection
35 42 34 Soil Reinforcement Bank Protection
35 42 35 Slope Protection Bank Protection
35 42 36 Gabion Bank Protection
35 42 37 Riprap Bank Protection
35 42 53 Wall Bank Protection
35 42 53.16 Concrete Unit Masonry Wall Bank Protection
35 42 53.19 Segmental Wall Bank Protection
35 42 53.40 Stone Wall Bank Protection

35 43 00 Waterway Scour Protection
35 43 29 Grout-Bag Scour Protection
35 43 34 Soil Reinforcement Scour Protection
35 43 35 Slope Protection Scour Protection
35 43 36 Gabion Scour Protection
35 43 37 Riprap Scour Protection
35 43 53 Wall Scour Protection
35 43 53.13 Concrete Unit Masonry Wall Scour Protection
35 43 53.16 Segmental Wall Scour Protection
35 43 53.40 Stone Wall Scour Protection

35 49 00 Waterway Structures
35 49 13 Floodwalls
35 49 13.13 Concrete Floodwalls
35 49 13.16 Masonry Floodwalls
35 49 23 Waterway Locks
35 49 23.13 Concrete Waterway Locks
35 49 23.23 Piling Waterway Locks
35 49 26 Floodgate Machinery

35 50 00 Marine Construction and Equipment

35 51 00 Floating Construction
35 51 13 Floating Piers
35 51 13.23 Floating Wood Piers
35 51 13.26 Floating Plastic Piers
35 51 23 Pontoons

35 52 00 Offshore Platform Construction
35 52 13 Fixed Offshore Platform Construction
35 52 23 Semi-Submersible Offshore Platform Construction
35 52 33  Floating Offshore Platform Construction

35 53 00  **Underwater Construction**
35 53 23  Underwater Harbor Deepening
35 53 33  Underwater Pipeline Construction
35 53 43  Underwater Foundation Construction
35 53 53  Underwater Structures Construction
35 53 63  Underwater Waterproofing

35 59 00  **Marine Specialties**
35 59 13  Marine Fenders
35 59 13.13  Prestressed Concrete Marine Fender Piling
35 59 13.16  Resilient Foam-Filled Marine Fenders
35 59 13.19  Rubber Marine Fenders
35 59 23  Buoys
35 59 23.13  Mooring Buoys
35 59 23.16  Anchor Pendant Buoys
35 59 23.19  Navigation Buoys
35 59 29  Mooring Devices
35 59 29.13  Quick-Release Mooring Hooks
35 59 29.16  Laser Docking Systems
35 59 29.19  Capstans
35 59 33  Marine Bollards and Cleats
35 59 33.13  Cast-Steel Marine Bollards and Cleats
35 59 33.16  Cast-Iron Marine Bollards and Cleats
35 59 33.19  Stainless-Steel Marine Bollards and Cleats
35 59 33.23  Plastic Marine Bollards and Cleats
35 59 93  Marine Chain and Accessories
35 59 93.13  Marine Chain
35 59 93.16  Marine Shackles
35 59 93.19  Marine Chain Tensioners

35 70 00  **Dam Construction and Equipment**

35 71 00  **Gravity Dams**
35 71 13  Concrete Gravity Dams
35 71 16  Masonry Gravity Dams
35 71 19  Rockfill Gravity Dams

35 72 00  **Arch Dams**
35 72 13  Concrete Arch Dams

35 73 00  **Embankment Dams**
35 73 13  Earth Embankment Dam
35 73 16  Rock Embankment Dams

35 74 00  **Buttress Dams**
35 74 13  Concrete Buttress Dams

35 79 00  **Auxiliary Dam Structures**
35 79 13  Fish Ladders
35 79 13.13  Concrete Fish Ladders
40 00 00  Process Integration
   40 01 00  Operation and Maintenance of Process Integration
      40 01 10  Operation and Maintenance of Gas and Vapor Process Piping
      40 01 20  Operation and Maintenance of Liquids Process Piping
      40 01 30  Operation and Maintenance of Solid and Mixed Materials Piping and Chutes
      40 01 40  Operation and Maintenance of Process Piping and Equipment Protection
   40 05 00  Common Work Results for Process Integration
      40 05 13  Common Work Results for Process Piping
         40 05 13.13  Steel Process Piping
         40 05 13.16  Lined or Internally-Coated Steel Process Piping
         40 05 13.19  Stainless-Steel Process Piping
         40 05 13.23  Aluminum Alloys Process Piping
         40 05 13.33  Brass, Bronze, Copper, and Copper Alloys Process Piping
         40 05 13.43  Nickel and Nickel Alloys Process Piping
         40 05 13.53  Ductile, Malleable, and Cast Iron Alloys Process Piping
         40 05 13.63  Titanium and Titanium Alloys Process Piping
         40 05 13.73  Plastic Process Piping
         40 05 13.76  Fiberglass-Reinforced Plastic and Resins Process Piping
         40 05 13.93  Other Metals Process Piping
      40 05 23  Common Work Results for Process Valves
         40 05 23.13  Carbon Steel Process Valves
         40 05 23.16  Low and Intermediate Alloy Steel Process Valves
         40 05 23.19  Stainless-Steel Process Valves
         40 05 23.33  Brass and Iron Process Valves
         40 05 23.43  Nickel and Nickel Alloys Steel Process Valves
         40 05 23.73  Plastic and Plastic Lined Process Valves
         40 05 23.93  Other Metals Process Valves
   40 06 00  Schedules for Process Integration
      40 06 10  Schedules for Gas and Vapor Process Piping
      40 06 20  Schedules for Liquids Process Piping
      40 06 30  Schedules for Solid and Mixed Materials Piping and Chutes
      40 06 40  Schedules for Process Piping and Equipment Protection
   40 10 00  Gas and Vapor Process Piping
   40 11 00  Steam Process Piping
      40 11 13  Low-Pressure Steam Process Piping
      40 11 16  Intermediate-Pressure Steam Process Piping
      40 11 19  High-Pressure Steam Process Piping
      40 11 23  Condensate Process Piping
   40 12 00  Compressed Air Process Piping
      40 12 13  Breathing Compressed Air Process Piping
      40 12 16  Non-Breathing Compressed Air Process Piping
   40 13 00  Inert Gases Process Piping
      40 13 13  Argon Process Piping
      40 13 16  Carbon-Dioxide Process Piping
      40 13 19  Helium Process Piping
      40 13 23  Krypton Process Piping
      40 13 26  Neon Process Piping
      40 13 29  Nitrogen Process Piping
40 13 33  Xenon Process Piping
40 13 93  Mixed Inert Gases Process Piping

**40 14 00  Fuel Gases Process Piping**
- 40 14 13  Blast Furnace Piping
- 40 14 16  Blue (Water) Fuel Gas Piping
- 40 14 19  Butane Piping
- 40 14 23  Carbon-Monoxide Piping
- 40 14 26  Chlorine Fuel Gas Piping
- 40 14 29  Coke Oven Gas Piping
- 40 14 33  Ethane-Gas Piping
- 40 14 36  Hydrogen Fuel Gas Piping
- 40 14 39  Liquid Natural-Gas Process Piping
- 40 14 43  Methylacetylene-Propadiene Fuel Gas Piping
- 40 14 49  Natural-Gas Process Piping
- 40 14 49.13  Synthetic Natural-Gas Piping
- 40 14 49.23  Propane-Air Mixes Fuel Gas Piping
- 40 14 53  Octane Fuel Gas Piping
- 40 14 59  Propane Fuel Gas Process Piping
- 40 14 63  Sewage Fuel Gas Piping
- 40 14 93  Mixed Fuel Gases Piping

**40 15 00  Combustion System Gas Piping**
- 40 15 13  Combustion Air Piping
- 40 15 16  Oxygen Combustion System Gas Piping
- 40 15 19  Flue-Gas Combustion System Piping
- 40 15 23  Exothermic-Gas Combustion System Piping
- 40 15 26  Endothermic-Gas Combustion System Piping
- 40 15 29  Disassociated-Ammonia-Gas Combustion System Piping

**40 16 00  Specialty and High-Purity Gases Piping**
- 40 16 13  Ammonia Gas Piping
- 40 16 16  Boron Gas Piping
- 40 16 26  Diborane Gas Piping
- 40 16 29  Flourine Gas Piping
- 40 16 33  Hydrogen Sulfide Gas Piping
- 40 16 36  Nitrous-Oxide Gas Process Piping
- 40 16 39  Ozone Gas Piping
- 40 16 43  Phosphine Gas Piping
- 40 16 46  Silane Gas Piping
- 40 16 49  Sulphur-Dioxide Gas Piping
- 40 16 53  Specialty Gas Mixtures Piping
- 40 16 56  High-Purity Gas Piping Components

**40 17 00  Welding and Cutting Gases Piping**
- 40 17 13  Acetylene Welding and Cutting Piping
- 40 17 16  Acetylene-Hydrogen Mix Welding and Cutting Piping
- 40 17 19  Methylacetylene-Propadiene Welding and Cutting Piping
- 40 17 23  Oxygen Welding and Cutting Piping
- 40 17 26  Inert Gas Welding and Cutting Piping

**40 18 00  Vacuum Systems Process Piping**
- 40 18 13  Low-Vacuum Systems Process Piping
- 40 18 16  High-Vacuum Systems Process Piping
40 20 00  Liquids Process Piping

40 21 00  Liquid Fuel Process Piping
   40 21 13  Bio Fuels Process Piping
   40 21 16  Gasoline Process Piping
   40 21 19  Diesel Process Piping
   40 21 23  Fuel-Oils Process Piping
   40 21 23.13 No. 2 Fuel-Oil Process Piping
   40 21 23.16 No. 4 Fuel-Oil Process Piping
   40 21 23.19 No. 5 Fuel-Oil Process Piping
   40 21 23.23 No. 6 Fuel-Oil Process Piping
   40 21 23.26  Kerosene Process Piping
   40 21 23.29  Tar Process Piping

40 22 00  Petroleum Products Piping
   40 22 13  Heavy-Fractions Petroleum Products Piping
   40 22 16  Light-Fractions Petroleum Products Piping

40 23 00  Water Process Piping
   40 23 13  Deionized Water Process Piping
   40 23 16  Distilled-Water Process Piping
   40 23 19  Process Plant Water Piping
   40 23 23  Potable Water Process Piping
   40 23 29  Recirculated Water Process Piping
   40 23 33  Reverse-Osmosis Water Process Piping
   40 23 36  Sanitary Water Process Piping

40 24 00  Specialty Liquid Chemicals Piping
   40 24 13  Alcohol Piping
   40 24 16  Gel Piping
   40 24 19  Slurries Process Piping
   40 24 23  Thixotropic Liquid Piping

40 25 00  Liquid Acids and Bases Piping
   40 25 13  Liquid Acids Piping
   40 25 16  Liquid Bases Piping

40 26 00  Liquid Polymer Piping

40 30 00  Solid and Mixed Materials Piping and Chutes

40 32 00  Bulk Materials Piping and Chutes
   40 32 13  Abrasive Materials Piping and Chutes
   40 32 16  Nonabrasive Materials Piping and Chutes

40 33 00  Bulk Materials Valves
   40 33 13  Airlock Bulk Materials Valves
   40 33 16  Blind Bulk Materials Valves
   40 33 19  Butterfly Bulk Materials Valves
   40 33 23  Cone Bulk Materials Valves
   40 33 26  Diverter Bulk Materials Valves
   40 33 29  Double or Single Dump Bulk Materials Valves
   40 33 33  Knife and Slide Gate Bulk Materials Valves
   40 33 36  Pinch Bulk Materials Valves
   40 33 39  Swing Bulk Materials Valves
40 33 43 Specialty Bulk Materials Valves

40 34 00 Pneumatic Conveying Lines
40 34 13 Dense Phase Pneumatic Conveying Lines
40 34 16 Dilute Phase Pneumatic Conveying Lines

40 40 00 Process Piping and Equipment Protection

40 41 00 Process Piping and Equipment Heat Tracing
40 41 13 Process Piping Heat Tracing
40 41 13.13 Process Piping Electrical Resistance Heat Tracing
40 41 13.16 Process Piping Electrical Conductance Heat Tracing
40 41 13.19 Process Piping Gas Heat Tracing
40 41 13.23 Process Piping Steam Heat Tracing
40 41 13.26 Process Piping Thermal Fluids Heat Tracing
40 41 23 Process Equipment Heat Tracing
40 41 23.13 Process Equipment Electrical Resistance Heat Tracing
40 41 23.16 Process Equipment Electrical Conductance Heat Tracing
40 41 23.19 Process Equipment Gas Heat Tracing
40 41 23.23 Process Equipment Steam Heat Tracing
40 41 23.26 Process Equipment Thermal Fluids Heat Tracing

40 42 00 Process Piping and Equipment Insulation
40 42 13 Process Piping Insulation
40 42 13.13 Cryogenic Temperature Process Piping Insulation
40 42 13.16 Low Temperature Process Piping Insulation
40 42 13.19 Intermediate Temperature Process Piping Insulation
40 42 13.23 High Temperature Process Piping Insulation
40 42 13.26 Process Piping Insulation for Specialty Applications
40 42 23 Process Equipment Insulation
40 42 23.13 Cryogenic Temperature Process Equipment Insulation
40 42 23.16 Low Temperature Process Equipment Insulation
40 42 23.19 Intermediate Temperature Process Equipment Insulation
40 42 23.23 High Temperature Process Equipment Insulation
40 42 23.26 Process Equipment Insulation for Specialty Applications

40 46 00 Process Corrosion Protection
40 46 16 Coatings and Wrappings for Process Corrosion Protection
40 46 42 Cathodic Process Corrosion Protection

40 47 00 Refractories
40 47 13 Silica Refractories
40 47 16 Alumina Refractories
40 47 19 Carbon and Graphite Refractories
40 47 23 Castable Refractories
40 47 26 Rammed Refractories
40 47 29 Refractory Concrete

40 80 00 Commissioning of Process Systems

40 90 00 Instrumentation and Control for Process Systems

40 91 00 Primary Process Measurement Devices
40 91 13 Chemical Properties Process Measurement Devices
40 91 13.13 Ammonia Process Measurement Devices
40 91 13.16 Chlorine Process Measurement Devices
40 91 13.19 Fluoride Process Measurement Devices
40 91 13.23  Gas Analysis Process Measurement Devices
40 91 13.26  Gas Chromatograph Process Measurement Devices
40 91 13.29  pH Level Process Measurement Devices
40 91 16   Electromagnetic Process Measurement Devices
40 91 16.13  Amperes Process Measurement Devices
40 91 16.16  Capacitance Process Measurement Devices
40 91 16.19  Conductivity Process Measurement Devices
40 91 16.23  Inductance Process Measurement Devices
40 91 16.26  Lumens Process Measurement Devices
40 91 16.29  Magnetic Field Process Measurement Devices
40 91 16.33  Electrical Power Process Measurement Devices
40 91 16.36  Radiation Process Measurement Devices
40 91 16.39  Electrical Resistance Process Measurement Devices
40 91 16.43  Ultraviolet Sensors
40 91 16.46  Voltage Process Measurement Devices
40 91 19  Physical Properties Process Measurement Devices
40 91 19.13  Density Process Measurement Devices
40 91 19.16  Humidity Process Measurement Devices
40 91 19.19  Mass Process Measurement Devices
40 91 19.23  Particle Counters Process Measurement Devices
40 91 19.26  Gas Pressure Process Measurement Devices
40 91 19.29  Liquid Pressure Process Measurement Devices
40 91 19.33  Stress/Strain Process Measurement Devices
40 91 19.36  Temperature Process Measurement Devices
40 91 19.39  Vapor Pressure Process Measurement Devices
40 91 19.43  Weight Process Measurement Devices
40 91 23  Miscellaneous Properties Measurement Devices
40 91 23.13  Acceleration Process Measurement Devices
40 91 23.16  Angle Process Measurement Devices
40 91 23.19  Color Process Measurement Devices
40 91 23.23  Count Process Measurement Devices
40 91 23.26  Distance Process Measurement Devices
40 91 23.29  Energy Process Measurement Devices
40 91 23.33  Flow Process Measurement Devices
40 91 23.36  Level Process Measurement Devices
40 91 23.39  Physical Resistance Process Measurement Devices
40 91 23.43  RPM Process Measurement Devices
40 91 23.46  Time Process Measurement Devices
40 91 23.49  Turbidity Process Measurement Devices
40 91 23.53  Velocity Process Measurement Devices

40 92 00  Primary Control Devices
40 92 13  Primary Control Valves
40 92 13.13  Electrically-Operated Primary Control Valves
40 92 13.16  Hydraulically-Operated Primary Control Valves
40 92 13.19  Pneumatically-Operated Primary Control Valves
40 92 13.23  Pressure-Relief Primary Control Valves
40 92 13.26  Solenoid Primary Control Valves
40 92 13.29  Specialty Primary Control Valves
40 92 29  Current-To-Pressure Converters
40 92 33  Self-Contained Flow Controllers
40 92 36  Linear Actuators and Positioners
40 92 39  Self-Contained Pressure Regulators
40 92 43  Rotary Actuators
40 92 46  Saturable Core Reactors
40 92 49  Variable Frequency Drives  
40 92 53  Voltage-To-Pressure Converters  

40 93 00  Analog Controllers/Recorders  
40 93 13  Analog Controllers  
40 93 13.13  Electronic Analog Controllers  
40 93 13.16  Electro-Hydraulic Analog Controllers  
40 93 13.19  Electro-Pneumatic Analog Controllers  
40 93 13.23  Hydraulic Analog Controllers  
40 93 13.26  Pneumatic Analog Controllers  
40 93 23  Chart Recorders  

40 94 00  Digital Process Controllers  
40 94 13  Digital Process Control Computers  
40 94 13.13  Host Digital Process Control Computers  
40 94 13.16  Personal Digital Process Control Computers  
40 94 13.19  Personal Digital Assistant Digital Process Control Computers  
40 94 23  Distributed Process Control Systems  
40 94 33  Human - Machine Interfaces  
40 94 43  Programmable Logic Process Controllers  

40 95 00  Process Control Hardware  
40 95 13  Process Control Panels and Hardware  
40 95 13.13  Local Process Control Panels and Hardware  
40 95 13.23  Main Process Control Panels and Hardware  
40 95 20  Process Control Display Devices  
40 95 23  Process Control Input/Output Modules  
40 95 26  Process Control Instrument Air Piping and Devices  
40 95 33  Process Control Networks  
40 95 33.13  Cabled Process Control Networks  
40 95 33.23  Fiber Optic Process Control Networks  
40 95 33.33  Wireless Process Control Networks  
40 95 43  Process Control Hardware Interfaces  
40 95 46  Process Control Mounting Racks and Supports  
40 95 49  Process Control Routers  
40 95 53  Process Control Switches  
40 95 56  Process Control Transformers  
40 95 63  Process Control Wireless Equipment  
40 95 63.13  Process Control Wireless Transmitters  
40 95 63.16  Process Control Wireless Receivers  
40 95 63.19  Process Control Wireless Repeaters  
40 95 73  Process Control Wiring  
40 95 73.23  Process Control Cable  
40 95 73.33  Process Control Conduit, Raceway and Supports  
40 95 73.43  Process Control Junction Boxes  

40 96 00  Process Control Software  
40 96 10  Process Control Software Architecture  
40 96 15  Process Control Software Input/Output Lists  
40 96 20  Process Control Software Instrument Lists  
40 96 25  Process Control Software Logic Diagrams  
40 96 30  Process Control Software Loop Diagrams  
40 96 35  Process Control Software Programming  
40 96 40  Process Control Software Reports  

40 97 00  Process Control Auxiliary Devices
40 97 10  Process Control Annunciators
40 97 15  Process Control Gages
40 97 20  Process Control Rotameters
40 97 25  Process Control Potentiometers
40 97 30  Process Control Test Equipment
41 00 00 Material Processing and Handling Equipment

41 01 00 Operation and Maintenance of Material Processing and Handling Equipment
   41 01 10 Operation and Maintenance of Bulk Material Processing Equipment
   41 01 20 Operation and Maintenance of Piece Material Handling Equipment
   41 01 30 Operation and Maintenance of Manufacturing Equipment
   41 01 40 Operation and Maintenance of Container Processing and Packaging
   41 01 50 Operation and Maintenance of Material Storage
   41 01 60 Operation and Maintenance of Mobile Plant Equipment

41 06 00 Schedules for Material Processing and Handling Equipment
   41 06 10 Schedules for Bulk Material Processing Equipment
   41 06 20 Schedules for Piece Material Handling Equipment
   41 06 30 Schedules for Manufacturing Equipment
   41 06 40 Schedules for Container Processing and Packaging
   41 06 50 Schedules for Material Storage
   41 06 60 Schedules for Mobile Plant Equipment

41 08 00 Commissioning of Material Processing and Handling Equipment
   41 08 10 Commissioning of Bulk Material Processing Equipment
   41 08 20 Commissioning of Piece Material Handling Equipment
   41 08 30 Commissioning of Manufacturing Equipment
   41 08 40 Commissioning of Container Processing and Packaging
   41 08 50 Commissioning of Material Storage
   41 08 60 Commissioning of Mobile Plant Equipment

41 10 00 Bulk Material Processing Equipment

41 11 00 Bulk Material Sizing Equipment
   41 11 13 Bulk Material Agglomerators
   41 11 16 Bulk Material Air Mill Classifiers
   41 11 19 Bulk Material Centrifuges
   41 11 23 Bulk Material Crushers
   41 11 26 Bulk Material Cyclones
   41 11 29 Bulk Material Fluid Bed Separators
   41 11 33 Bulk Material Grinders
   41 11 36 Bulk Material Homogenizers
   41 11 39 Bulk Material Lump Breakers
   41 11 43 Bulk Material Mills
   41 11 46 Bulk Material Pulverizers
   41 11 49 Bulk Material Screens
   41 11 53 Bulk Material Shredders
   41 11 56 Bulk Material Sieves

41 12 00 Bulk Material Conveying Equipment
   41 12 13 Bulk Material Conveyors
   41 12 13.13 Airlslide Bulk Material Conveyors
   41 12 13.16 Auger Bulk Material Conveyors
   41 12 13.19 Belt Bulk Material Conveyors
41 12 13.23 Container Bulk Material Conveyors
41 12 13.26 Drag Chain Bulk Material Conveyors
41 12 13.29 Hopper Bulk Material Conveyors
41 12 13.33 Reciprocating Bulk Material Conveyors
41 12 13.36 Screw Bulk Material Conveyors
41 12 13.39 Stacking and Reclaim Bulk Material Conveyors
41 12 13.43 Trough Bulk Material Conveyors
41 12 13.46 Tube Bulk Material Conveyors
41 12 13.49 Vibratory Bulk Material Conveyors
41 12 13.53 Weigh-Belt Bulk Material Conveyors
41 12 16 Bucket Elevators
41 12 19 Pneumatic Conveyors
41 12 19.13 Dense Phase Pneumatic Conveyors
41 12 19.16 Dilute Phase Pneumatic Conveyors

41 13 00 Bulk Material Feeders
41 13 13 Bin Activators/Live Bin Bottoms
41 13 23 Feeders
41 13 23.13 Airlock Bulk Material Feeders
41 13 23.16 Apron Bulk Material Feeders
41 13 23.19 Rotary-Valve Bulk Material Feeders
41 13 23.23 Screw Bulk Material Feeders
41 13 23.26 Vibratory Bulk Material Feeders
41 13 23.29 Volumetric Bulk Material Feeders
41 13 23.33 Weigh Bulk Material Feeders

41 14 00 Batching Equipment
41 14 13 Bag-Handling Batching Equipment
41 14 16 Batch Cars/Transports
41 14 19 Batch Hoppers
41 14 23 Bulk Bag-Handling Batching Equipment
41 14 26 Blenders
41 14 29 Drum-Handling Batching Equipment
41 14 33 Mixers
41 14 36 Weigh Scales

41 20 00 Piece Material Handling Equipment
41 21 00 Conveyors
41 21 13 Automatic Guided Vehicle Systems
41 21 23 Piece Material Conveyors
41 21 23.13 Belt Piece Material Conveyors
41 21 23.16 Container Piece Material Conveyors
41 21 23.19 Drag-Chain Piece Material Conveyors
41 21 23.23 Hopper Piece Material Conveyors
41 21 23.26 Monorail Piece Material Conveyors
41 21 23.29 Power and Free Piece Material Conveyors
41 21 23.33 Reciprocating Piece Material Conveyors
41 21 23.36 Roller Piece Material Conveyors
41 21 23.39 Vibratory Piece Material Conveyors
41 21 23.43 Walking-Beam Piece Material Conveyors
41 21 23.46 Weigh-Belt Piece Material Conveyors
41 21 23.53 Postal Conveyors
41 21 26 Piece Material Diverter Gates
41 21 29 Piece Material Gravity Slides
41 21 33 Piece Material Transfer Cars
41 21 36  Piece Material Turntables
41 21 39  Piece Material Feeders
41 21 39.13 Piece Material Vibratory Feeders

41 22 00  Cranes and Hoists
41 22 13  Cranes
41 22 13.13 Bridge Cranes
41 22 13.16 Gantry Cranes
41 22 13.19 Jib Cranes
41 22 13.23 Mobile Cranes
41 22 13.26 Tower Cranes
41 22 13.29 Specialty Cranes
41 22 23  Hoists
41 22 23.13 Fixed Hoists
41 22 23.16 Portable Hoists
41 22 23.19 Monorail Hoists
41 22 23.23 Specialty Hoists
41 22 33  Derricks

41 23 00  Lifting Devices
41 23 13  Clamps
41 23 16  Grabs
41 23 19  Hooks
41 23 23  Lifts
41 23 26  Slings
41 23 29  Spreader Bars/Beams
41 23 33  Tongs

41 24 00  Specialty Material Handling Equipment
41 24 13  Aeration Devices
41 24 16  Bin Vibrators
41 24 19  Dehydrators
41 24 23  Hydrators
41 24 26  Hydraulic Power Systems
41 24 29  Lubrication Systems
41 24 33  Magnetic Separators
41 24 36  Metal Detectors
41 24 39  Railcar Movers
41 24 43  Turnheads/Distributors
41 24 46  Sorting Machines
41 24 46.13 Postal Sorting Machines

41 30 00  Manufacturing Equipment
41 31 00  Manufacturing Lines and Equipment
41 31 13  Manufacturing Lines
41 31 13.13 Assembly Lines
41 31 13.16 Casting Lines
41 31 13.19 Coating Lines
41 31 13.23 Converting Lines
41 31 13.26 Disassembly Lines
41 31 13.29 Extrusion Lines
41 31 13.33 Machining Lines
41 31 13.36 Molding Lines
41 31 13.39 Finishing/Painting Lines
41 31 13.43 Painting Lines
41 31 13.46 Pickling Lines
41 31 13.49 Plating Lines
41 31 13.53 Polishing Lines
41 31 13.56 Press Lines
41 31 13.59 Rolling/Calendaring Lines
41 31 13.63 Web Processing Lines
41 31 16 Pick and Place Systems
41 31 19 Manufacturing-Line Robots
41 31 23 Specialty Assembly Machines

41 32 00 Forming Equipment
41 32 13 Bending Equipment
41 32 16 Blow-Molding Equipment
41 32 19 Brake-Forming Equipment
41 32 23 Cold-Forming Equipment
41 32 26 Die-Casting Equipment
41 32 29 Drawing Equipment
41 32 33 Electroforming Equipment
41 32 36 Forging Equipment
41 32 39 Extruding Equipment
41 32 43 Metal-Spinning Equipment
41 32 46 Piercing Equipment
41 32 49 Powder Metal-Forming Equipment
41 32 53 Pressing Equipment
41 32 56 Roll-Forming Equipment
41 32 59 Shearing Equipment
41 32 63 Spinning Equipment
41 32 66 Stretching/Leveling Equipment
41 32 69 Swaging Equipment

41 33 00 Machining Equipment
41 33 13 Automatic Screw Machining Equipment
41 33 16 Boring Equipment
41 33 19 Broaching Equipment
41 33 23 Drilling Equipment
41 33 26 Electro-Discharge Machining Equipment
41 33 29 Grinding Equipment
41 33 33 Hobbing Equipment
41 33 36 Lapping Equipment
41 33 39 Lathe Equipment
41 33 43 Leveling Equipment
41 33 46 Machining Center Equipment
41 33 53 Milling Equipment
41 33 53.13 Horizontal Milling Equipment
41 33 53.16 Vertical Milling Equipment
41 33 60 Multi-Axis Machine Equipment
41 33 63 Planing Equipment
41 33 66 Reaming Equipment
41 33 69 Routing Equipment
41 33 73 Sawing Equipment
41 33 76 Shaping Equipment
41 33 79 Threading Equipment

41 34 00 Finishing Equipment
41 34 13 Anodizing Equipment
41 34 16 Barrel Tumbling Equipment
41 34 23 Coating Equipment
41 34 23.13 Diffusion Coating Equipment
41 34 23.16 Dipping Coating Equipment
41 34 23.19 Film Coating Equipment
41 34 23.23 Phosphatizing Coating Equipment
41 34 23.26 Plasma Coating Equipment
41 34 23.29 Hardface Welding Coating Equipment
41 34 23.33 Spray Painting Booth
41 34 26 Deburring Equipment
41 34 36 Electroplating Equipment
41 34 46 Grinding Equipment
41 34 49 Honing Equipment
41 34 53 Lapping Equipment
41 34 56 Shot Peening Equipment
41 34 59 Superfinishing/Polishing Equipment

41 35 00 Dies and Molds
41 35 13 Dies
41 35 13.13 Drawing Dies
41 35 13.16 Extrusion Dies
41 35 13.19 Press Dies
41 35 13.23 Rotary Dies
41 35 13.26 Rule Dies
41 35 33 Molds

41 36 00 Assembly and Testing Equipment
41 36 13 Applicators
41 36 13.13 Adhesive Applicators
41 36 13.16 Lubricant Applicators
41 36 13.19 Sealer Applicators
41 36 16 Fixtures and Jigs
41 36 19 Joining Equipment
41 36 19.13 Adhesive Joining Equipment
41 36 19.16 Arc-Welding Equipment
41 36 19.19 Brazing Equipment
41 36 19.23 Resistance-Welding Equipment
41 36 19.26 Riveting Equipment
41 36 19.29 Sintering Equipment
41 36 19.33 Soldering Equipment
41 36 23 Cutting Equipment
41 36 23.13 Cutting Torches
41 36 23.16 High-Pressure Water Cutting Equipment
41 36 23.19 Laser Cutting Equipment
41 36 23.23 Plasma Cutting Equipment
41 36 26 Process Tools
41 36 26.13 Air Process Tools
41 36 26.16 Electric Process Tools
41 36 26.19 Hydraulic Process Tools
41 36 26.23 Manual Process Tools
41 36 29 Manufacturing Measurement and Testing Equipment
41 36 29.13 Gages, Rules, and Blocks
41 36 29.16 Penetrant Measurement and Testing Equipment
41 36 29.19 Laser Measurement and Testing Equipment
41 36 29.23 Magnaflux Measurement and Testing Equipment
41 36 29.26 Optical Comparators
41 36 29.29 Profilometers
41 36 29.33 Radiograph Measurement and Testing Equipment
41 36 29.36 Surface Tables
41 36 29.39 Ultrasonic Measurement and Testing Equipment
41 36 29.43 Test Weigh Scales

41 40 00 Container Processing and Packaging

41 41 00 Container Filling and Sealing
41 41 13 Bulk Container Fillers/Packers
41 41 16 Container Cappers
41 41 19 Container Fillers
41 41 19.13 Bag Fillers
41 41 19.16 Box Fillers
41 41 19.19 Bottle Fillers
41 41 23 Container Sealers

41 42 00 Container Packing Equipment
41 42 13 Box Packing Equipment
41 42 13.13 Box Makers
41 42 13.16 Box Packers
41 42 16 Bulk Material Loaders
41 42 16.13 Container Bulk Material Loaders
41 42 16.23 Truck Bulk Material Loaders
41 42 16.26 Railcar Bulk Material Loaders
41 42 16.29 Ship Bulk Material Loaders
41 42 16.33 Barge Bulk Material Loaders
41 42 19 Carton Packers
41 42 23 Carton Sealers
41 42 26 Carton Shrink Wrappers
41 42 29 Carton Stackers

41 43 00 Shipping Packaging
41 43 13 Banding/Strapping Equipment
41 43 16 Barcode Equipment
41 43 16.13 Barcode Readers
41 43 16.16 Barcode Printers
41 43 19 Labeling Equipment
41 43 23 Pallet Stacking/Wrapping Equipment

41 50 00 Material Storage

41 51 00 Automatic Material Storage
41 51 13 Automatic Storage/Automatic Retrieval Systems

41 52 00 Bulk Material Storage
41 52 13 Bins and Hoppers
41 52 13.13 Fixed Bins and Hoppers
41 52 13.23 Portable Bins and Hoppers
41 52 13.33 Bulk Material Containers
41 52 13.43 Returnable Bins and Hoppers
41 52 13.53 Throwaway Bins and Hoppers
41 52 16 Silos
41 52 16.13 Concrete Silos
41 52 16.16 Concrete Masonry Unit Silos
41 52 16.19 Steel Silos
41 52 19 Material Storage Tanks
41 52 19.13 Horizontal Material Storage Tanks
41 52 19.23 Vertical Material Storage Tanks
41 52 19.33 Portable Material Storage Tanks

41 53 00 Storage Equipment and Systems
41 53 13 Storage Cabinets
41 53 16 Container Storage Systems
41 53 19 Flat Files
41 53 23 Storage Racks
41 53 23.13 Mobile Storage Racks
41 53 26 Mezzanine Storage Systems

41 60 00 Mobile Plant Equipment

41 61 00 Mobile Earth Moving Equipment
41 61 13 Backhoes
41 61 16 Bulldozers
41 61 19 Compactors
41 61 23 Excavators
41 61 26 Graders
41 61 29 Payloaders
41 61 33 Trenchers

41 62 00 Trucks
41 62 13 Cement Mixer Trucks
41 62 16 Dump Trucks
41 62 19 Flatbed Trucks
41 62 23 Forklift Trucks
41 62 26 Pickup Trucks
41 62 29 Tank Trucks

41 63 00 General Vehicles
41 63 13 Bicycles
41 63 16 Carts
41 63 19 Maintenance Vehicles
41 63 23 Utility Vehicles
41 63 26 Vans
41 63 29 Wagons

41 64 00 Rail Vehicles
41 64 13 Locomotives
41 64 13.13 Diesel Locomotives
41 64 13.23 Electric Locomotives
41 64 16 Mobile Railcar Movers

41 65 00 Mobile Support Equipment
41 65 13 Mobile Air Compressors
41 65 16 Mobile Generators
41 65 19 Mobile Welders

41 66 00 Miscellaneous Mobile Equipment
41 66 13 Mobile Boring and Drilling Rigs
41 66 16 Mobile Lifts and Cherrypickers
41 66 19 Mobile Paving Equipment
41 66 23 Mobile Sweepers/Vacuums
41 67 00  Plant Maintenance Equipment
41 67 13  Plant Lube Oil System
41 67 16  Plant Fall Protection Equipment
41 67 19  Plant Safety Equipment
41 67 23  Plant Maintenance Tools
41 67 26  Plant Maintenance Washing Equipment
42 00 00  Process Heating, Cooling, and Drying Equipment

42 01 00  Operation and Maintenance of Process Heating, Cooling, and Drying Equipment
  42 01 10  Operation and Maintenance of Process Heating Equipment
  42 01 20  Operation and Maintenance of Process Cooling Equipment
  42 01 30  Operation and Maintenance of Process Drying Equipment

42 06 00  Schedules for Process Heating, Cooling, and Drying Equipment
  42 06 10  Schedules for Process Heating Equipment
  42 06 20  Schedules for Process Cooling Equipment
  42 06 30  Schedules for Process Drying Equipment

42 08 00  Commissioning of Process Heating, Cooling, and Drying Equipment
  42 08 10  Commissioning of Heating Equipment
  42 08 20  Commissioning of Cooling Equipment
  42 08 30  Commissioning of Drying Equipment

42 10 00  Process Heating Equipment

42 11 00  Process Boilers
  42 11 13  Low-Pressure Process Boilers
  42 11 16  Intermediate-Pressure Process Boilers
  42 11 19  High-Pressure Process Boilers
  42 11 23  Specialty Process Boilers

42 12 00  Process Heaters
  42 12 13  Electric Process Heaters
  42 12 16  Fuel-Fired Process Heaters
  42 12 19  Thermoelectric Process Heaters
  42 12 23  Solar Process Heaters
  42 12 26  Specialty Process Heaters

42 13 00  Industrial Heat Exchangers and Recuperators
  42 13 13  Industrial Gas-to-Gas Heat Exchangers
  42 13 16  Industrial Liquid-to-Gas/Gas-to-Liquid Heat Exchangers
  42 13 19  Industrial Liquid-to-Liquid Heat Exchangers
  42 13 23  Industrial Gas Radiation Heat Exchangers
  42 13 26  Industrial Solar Radiation Heat Exchangers

42 14 00  Industrial Furnaces
  42 14 13  Annealing Furnaces
  42 14 16  Atmosphere Generators
  42 14 19  Industrial Baking Furnaces
  42 14 23  Industrial Brazing Furnaces
  42 14 26  Industrial Calcining Furnaces
  42 14 29  Industrial Heat-Treating Furnaces
  42 14 33  Industrial Melting Furnaces
  42 14 33.13  Ceramics and Glass Melting Furnaces
  42 14 33.16  Ferrous Melting Furnaces
  42 14 33.19  Non-Ferrous Melting Furnaces
42 14 36 Primary Refining Furnaces
42 14 43 Reactor Furnaces
42 14 46 Industrial Reheat Furnaces
42 14 53 Industrial Sintering Furnaces
42 14 56 Industrial Vacuum Furnaces

42 15 00 Industrial Ovens
42 15 13 Industrial Drying Ovens
42 15 16 Industrial Curing Ovens
42 15 19 Industrial Specialty Ovens

42 20 00 Process Cooling Equipment
42 21 00 Process Cooling Towers
42 21 13 Open-Circuit Process Cooling Towers
42 21 16 Closed-Circuit Process Cooling Towers

42 22 00 Process Chillers and Coolers
42 22 13 Centrifugal Process Chillers and Coolers
42 22 16 Reciprocating Process Chillers and Coolers
42 22 19 Refrigerant Process Chillers and Coolers
42 22 23 Rotary Process Chillers and Coolers
42 22 26 Thermoelectric Process Chillers and Coolers

42 23 00 Process Condensers and Evaporators
42 23 13 Process Condensers
42 23 16 Process Cooling Evaporators
42 23 19 Process Humidifiers

42 30 00 Process Drying Equipment
42 31 00 Gas Dryers and Dehumidifiers
42 31 13 Drying Evaporators
42 31 16 Desiccant Equipment
42 31 19 Regenerative Dryers
42 31 23 Refrigerant Dryers

42 32 00 Material Dryers
42 32 13 Centrifugal Material Dryers
42 32 16 Conveyor Material Dryers
42 32 19 Flash Material Dryers
42 32 23 Fluid-Bed Material Dryers
42 32 26 Material Roasters
42 32 29 Rotary-Kiln Material Dryers
42 32 33 Spray Material Dryers
42 32 36 Tower Material Dryers
42 32 39 Vacuum Material Dryers
42 32 43 Specialty Material Dryers
43 00 00 Process Gas and Liquid Handling, Purification, and Storage Equipment

43 01 00 Operation and Maintenance of Process Gas and Liquid Handling, Purification, and Storage Equipment
43 01 10 Operation and Maintenance of Gas Handling Equipment
43 01 10.13 Gas Blowers Maintenance and Rehabilitation
43 01 10.16 Gas Compressors Maintenance and Rehabilitation
43 01 20 Operation and Maintenance of Liquid Handling Equipment
43 01 20.13 Liquid Pumps Maintenance and Rehabilitation
43 01 20.16 Liquid Process Equipment Maintenance and Rehabilitation
43 01 30 Operation and Maintenance of Gas and Liquid Hi-Purification Equipment
43 01 40 Operation and Maintenance of Gas and Liquid Storage
43 01 40.13 Non-pressurized Tanks Cleaning, Maintenance, and Rehabilitation
43 01 40.16 Pressurized Tanks Cleaning, Maintenance, and Rehabilitation

43 05 00 Common Work Results for Process Gas and Liquid Handling, Purification, and Storage Equipment
43 05 10 Common Work Results for Gas Handling Equipment
43 05 20 Common Work Results for Liquid Handling Equipment
43 05 30 Common Work Results for Gas and Liquid Hi-Purification Equipment
43 05 40 Common Work Results for Gas and Liquid Storage

43 06 00 Schedules for Process Gas and Liquid Handling, Purification, and Storage Equipment
43 06 10 Schedules for Gas Handling Equipment
43 06 20 Schedules for Liquid Handling Equipment
43 06 30 Schedules for Gas and Liquid Hi-Purification Equipment
43 06 40 Schedules for Gas and Liquid Storage

43 08 00 Commissioning of Process Gas and Liquid Handling, Purification, and Storage Equipment
43 08 10 Commissioning of Gas Handling Equipment
43 08 20 Commissioning of Liquid Handling Equipment
43 08 30 Commissioning of Gas and Liquid Purification Equipment
43 08 40 Commissioning of Gas and Liquid Storage

43 10 00 Gas Handling Equipment

43 11 00 Gas Fans, Blowers, Pumps and Boosters
43 11 11 Direct Drive Single Stage Centrifugal Blowers
43 11 12 Integrally Geared Single Stage Centrifugal Blowers
43 11 13 Separately Geared Single Stage Centrifugal Blowers
43 11 14 Direct Drive Integral Shaft Single Stage Centrifugal Blowers
43 11 17 Horizontally Split Multistage Centrifugal Blowers
43 11 18 Vertically Split Multistage Centrifugal Blowers
43 11 19 Centrifugal Fans
43 11 23 Axial Blowers
43 11 26 Axial Fans
43 11 31 Rotary Helical Screw Blowers
43 11 33 Rotary Lobe Blowers
43 11 34 Regenerative Rotary Blowers
43 11 36 Rotary Vane Blowers
43 11 41 Gas-handling Venturi Jet Pumps
43 11 43 Gas-handling Vacuum Pumps
43 11 46 Gas Boosters

43 12 00 Gas Compressors
43 12 11 Centrifugal Compressors
43 12 13 Diagonal or Mixed-flow Compressors
43 12 16 Axial-flow Compressors
43 12 33 Single-acting Reciprocating Compressors
43 12 34 Double-acting Reciprocating Compressors
43 12 37 Diaphragm Reciprocating Compressors
43 12 51 Rotary Screw Compressors
43 12 53 Rotary Vane Compressors
43 12 56 Rotary Liquid-ring Compressors
43 12 57 Rotary Scroll Compressors

43 13 00 Gas Process Equipment
43 13 13 Gas Blenders
43 13 19 Gas Mixers
43 13 23 Gas Pressure Regulators
43 13 31 Gas Separation Equipment
43 13 33 Gas Dehydration Equipment
43 13 36 Combined Gas Separation and Dehydration Equipment
43 13 39 Gas Recovery and Condensing Equipment
43 13 43 Waste Gas Burner System
43 13 46 Gas Control and Safety Equipment

43 15 00 Process Air and Gas Filters
43 15 13 Blower Intake and Turbine Air Filters
43 15 13.13 Static Prefilters
43 15 13.16 Static Final Filters
43 15 13.19 Static HEPA Filters
43 15 13.23 Pulse Filters
43 15 33 Grease Filters
43 15 43 Mist Eliminators
43 15 63 High-temperature Air Filters
43 15 73 Multiple-application Air Filters
43 15 73.11 Air Filter Media
43 15 73.12 Permanent Washable Filters
43 15 73.13 Poly-ring Air Filters
43 15 73.15 Rigid Cell Filters
43 15 73.17 Automatic Roll-type Air Filters
43 15 76 Chemical Media for Air and Gas Filters

43 20 00 Liquid Handling Equipment

43 21 00 Liquid Pumps
43 21 13 Centrifugal Liquid Pumps
43 21 16 Diaphragm Liquid Pumps
43 21 19 Dispensing Liquid Pumps
43 21 23 Drum Liquid Pumps
43 21 26 Gear Liquid Pumps
43 21 29 Metering Liquid Pumps
43 21 33 Piston/Plunger Liquid Pumps
43 21 36 Positive Displacement Liquid Pumps
43 21 39  Submersible Liquid Pumps
43 21 43  Sump Liquid Pumps
43 21 46  Vane Liquid Pumps

**43 22 00  Liquid Process Equipment**
- 43 22 13  Liquid Aeration Devices
- 43 22 16  Liquid Agitators
- 43 22 19  Liquid Blenders
- 43 22 23  Liquid Centrifuges
- 43 22 26  Liquid Deaerators
- 43 22 29  Drum Handling Liquid Process Equipment
- 43 22 33  Liquid Emulsifiers
- 43 22 36  Liquid Evaporators
- 43 22 39  Liquid Feeders
- 43 22 56  Liquid Process Mixers
- 43 22 59  Liquid Process Pressure Regulators
- 43 22 63  Liquid Separation Towers
- 43 22 66  Liquid Weigh Systems
- 43 22 69  Liquid Grease Receiving and Dewatering Systems
- 43 22 73  Liquid Filters
- 43 22 76  Liquid Screeners
- 43 22 79  Liquid Clarifiers
- 43 22 83  Liquid Classifiers
- 43 22 86  Liquid Homogenizers
- 43 22 89  Liquid Presses
- 43 22 96  Liquid Versators
- 43 22 99  Liquid Votators

**43 27 00  Process Liquid Filters**
- 43 27 13  Cyclonic Liquid Filters
- 43 27 16  Centrifugal Horizontal Pressure Leaf Liquid Filters
- 43 27 19  Press Liquid Filters
- 43 27 23  Liquid Bag Filters
- 43 27 33  Mechanically Cleaned Liquid Filters
- 43 27 43  Tubular Backwashing Liquid Filters
- 43 27 53  Vacuum Belt Liquid Filters
- 43 27 63  Woven Media Liquid Filters
- 43 27 63.13  Disc Liquid Filters
- 43 27 63.23  Rotating Drum Liquid Filters
- 43 27 63.33  Layer Liquid Filters
- 43 27 63.43  Candle Liquid Filters
- 43 27 63.53  Vertical Leaf Liquid Filters
- 43 27 73  Nonwoven Media Liquid Filters
- 43 27 73.13  Surface Liquid Filters
- 43 27 73.23  Depth Liquid Filters

**43 30 00  Gas and Liquid Purification Equipment**

**43 31 00  Gas and Liquid Purification Filtration Equipment**
- 43 31 13  Gas and Liquid Purification Filters
- 43 31 13.13  Activated Carbon-Gas and Liquid Purification Filters
- 43 31 13.16  Gas and Liquid Purification Filter Presses
- 43 31 13.19  High-Purity Cartridge Gas and Liquid Purification Filters
- 43 31 13.23  Membrane Diaphragm Gas and Liquid Purification Filters
43 31 13.26 Multimedia Gas and Liquid Purification Filters
43 31 13.29 Pretreatment Cartridge Gas and Liquid Purification Filters
43 31 13.33 Ultrafilter Units

43 32 00 Gas and Liquid Purification Process Equipment
43 32 13 Gas and Liquid Purification Process Beds
43 32 13.13 Anion-Gas and Liquid Purification Process Beds
43 32 13.16 Cation-Gas and Liquid Purification Process Beds
43 32 23 Gas and Liquid Purification Process Clarifier Systems
43 32 26 Gas and Liquid Purification Decarbonators
43 32 29 Electronic Deionization Purification Units
43 32 33 External Regeneration Systems
43 32 36 Mixed-Bed Ion-Exchange Vessels
43 32 39 Gas and Liquid Purification Mixed Beds
43 32 39.13 Externally Regenerable Gas and Liquid Purification Mixed Beds
43 32 39.16 In-Situ Regenerable Gas and Liquid Purification Mixed Beds
43 32 53 Packed-Bed Ion-Exchange Vessels
43 32 56 Reverse-Osmosis Purification Units
43 32 59 Gas and Liquid Purification Scrubbers
43 32 63 Ultraviolet Sterilizers
43 32 66 Vacuum Degasifiers
43 32 69 Chemical Feed Systems
43 32 73 Ozonation Equipment
43 32 76 Chlorination Equipment

43 40 00 Gas and Liquid Storage

43 41 00 Non-pressurized Tanks and Vessels
43 41 11 Bolted Steel Tanks
43 41 13 Welded Steel Tanks
43 41 13.13 Glass-lined Welded Steel Tanks
43 41 13.23 Rubber-lined Welded Steel Tanks
43 41 13.33 Epoxy-lined Welded Steel Tanks
43 41 13.43 Ceramic-lined Welded Steel Tanks
43 41 23 Stainless Steel Tanks
43 41 26 Aluminum Tanks
43 41 31 Metallic Specialty Tanks
43 41 41 Polyvinyl Chloride Tanks
43 41 43 Polyethylene Tanks
43 41 45 Fiberglass Reinforced Plastic Tanks
43 41 53 Wood Stave Tanks
43 41 63 Precast Concrete Tanks
43 41 73 Ceramic Tanks
43 41 83 Non-metallic Specialty Tanks

43 42 00 Pressurized Tanks and Vessels
43 42 11 Cast Iron Pressure Tanks
43 42 13 Ductile Iron Pressure Tanks
43 42 21 Welded Steel Pressure Tanks
43 42 23 Glass-lined Steel Pressure Tanks
43 42 26 Welded Steel Gas Storage Sphere
43 42 33 Stainless Steel Pressure Tanks
43 42 36 Aluminum Pressure Tanks
43 42 41 Metallic Specialty Pressure Tanks
43 42 53  Fiberglass Reinforced Plastic Pressure Tanks
43 42 83  Non-metallic Specialty Pressure Tanks
**Pollution and Waste Control Equipment**

**Operation and Maintenance of Pollution and Waste Control Equipment**
- 44 01 10 Operation and Maintenance of Air Pollution Control
- 44 01 20 Operation and Maintenance of Noise Pollution Control
- 44 01 30 Operation and Maintenance of Odor Control Equipment
- 44 01 40 Operation and Maintenance of Water Pollution Control Equipment
- 44 01 50 Operation and Maintenance of Solid Waste Control and Reuse
- 44 01 60 Operation and Maintenance of Waste Thermal Processing Equipment

**Common Work Results for Pollution and Waste Control Equipment**

**Schedules for Pollution and Waste Control Equipment**
- 44 06 10 Schedules for Air Pollution Control
- 44 06 20 Schedules for Noise Pollution Control
- 44 06 30 Schedules for Odor Control Equipment
- 44 06 40 Schedules for Water Pollution Control Equipment
- 44 06 50 Schedules for Solid Waste Control and Reuse
- 44 06 60 Schedules for Waste Thermal Processing Equipment

**Commissioning of Pollution and Waste Control Equipment**
- 44 08 10 Commissioning of Air Pollution Control
- 44 08 20 Commissioning of Noise Pollution Control
- 44 08 30 Commissioning of Odor Control Equipment
- 44 08 40 Commissioning Water Pollution Control Equipment
- 44 08 50 Commissioning Solid Waste Control and Reuse
- 44 08 60 Commissioning of Waste Thermal Processing Equipment

**Air Pollution Control**

**Particulate Control Equipment**
- 44 11 13 Fugitive Dust Control
- 44 11 16 Fugitive Dust Barrier Systems
- 44 11 19 Atmospheric Air Quality Monitoring Equipment
- 44 11 20 Gravitational Separators
- 44 11 31 Venturi Scrubbing Equipment
- 44 11 33 Spray Tower/Chamber Scrubbing Equipment
- 44 11 36 Cyclone Scrubbing Equipment
- 44 11 51 Pulse Jet Fabric Filtration Equipment
- 44 11 53 Reverse Flow Fabric Filtration Equipment
- 44 11 54 Shake/Deflate Fabric Filtration Equipment
- 44 11 56 Cartridge Filtration Equipment
- 44 11 59 Disposable Dry Filtration Equipment
- 44 11 71 Cyclone Dust Collection Equipment
- 44 11 73 Multicyclone Dust Collection Equipment
- 44 11 76 Mist Elimination Equipment
- 44 11 93 Wet Electrostatic Precipitator Equipment
44 11 96  Dry Plate Electrostatic Precipitator Equipment

44 13 00  Gaseous Air Pollution Control Equipment
44 13 11  Spray Tower/Chamber Absorption Equipment
44 13 13  Packed Tower/Chamber Absorption Equipment
44 13 14  Tray Tower Absorption Equipment
44 13 16  Jet Bubbling Reactor Equipment
44 13 17  Venturi Absorption Equipment
44 13 20  Vacuum Extraction Systems
44 13 31  Powdered Injection Adsorption Equipment
44 13 33  Fluidized Bed Adsorption Equipment
44 13 34  Fixed Bed Adsorption Equipment
44 13 36  Rotary Bed Adsorption Equipment
44 13 39  Radial Bed Adsorption Equipment
44 13 51  Thermal Oxidation Equipment
44 13 53  Catalytic Oxidation Equipment
44 13 56  Flare Oxidation Equipment
44 13 59  Claus Sulfur Recovery Equipment
44 13 71  Thermal Reduction Equipment
44 13 73  Catalytic Reduction Equipment
44 13 76  Non-catalytic Reduction Equipment
44 13 77  Selective Non-catalytic Reduction Equipment
44 13 81  Condensation Systems
44 13 83  Contact Condensing Equipment
44 13 86  Solvent Recovery Equipment
44 13 91  Biofilter Media
44 13 93  Fixed Bed Biofilter Equipment
44 13 96  Fixed Bed Biotrickling Filter Equipment
44 13 97  Fixed Bed Bioscrubbing Equipment

44 20 00  Noise Pollution Control

44 21 00  Noise Pollution Control Equipment
44 21 13  Fixed Noise Abatement Barriers
44 21 16  Flexible Noise Abatement Barriers
44 21 19  Portable Noise Abatement Barriers
44 21 23  Noise Pollution Silencers
44 21 26  Frequency Cancellers

44 30 00  Odor Control

44 31 00  Odor Treatment Equipment
44 31 11  Wet Chemical Packed Tower Odor Control Equipment
44 31 13  Chemical Mist System Odor Control Equipment
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48 71 19  Electrical Power Generation Power Test Equipment
48 71 23  Electrical Power Generation Resistance Test Equipment
48 71 26  Electrical Power Generation Voltage Test Equipment